SAMSUNG

User Guide

Start

Contents

Contents

Chapter 1. Getting Started

Chapter 2. Using the Computer

Chapter 3. Settings and Upgrade

Chapter 4. Backup/Restore

Chapter 5. Appendix

Chapter 1.
Getting Started

Q **The computer is not turned on or does not respond and displays a blank screen.**

A Restore the computer using **Samsung Recovery Solution**.

1. Turn the computer on and press the F4 key when the booting screen (SAMSUNG logo) appears.
2. The computer will boot up in restore mode after a short while and the **Samsung Recovery Solution** appears.
3. When the start menu screen appears, click **Restore**.

Q **I want to restore the computer to the state when it was purchased.**

A If you use the **Samsung Recovery Solution** function, you can easily and quickly restore the computer to a previous state even if you do not have a separate OS recovery DVD or recovery CD.

Q **I want to connect an external monitor, TV or projector.**

A Connect the display device and the computer with the monitor and repeatedly press the P key while holding down the ⊞ key.

Q **I want to use the LCD as the monitor for a device. (Optional)**

A Restore Internet Explorer to its initial state.

Connect the LCD to the device using the HDMI cable and then press the ↵ SOURCE **touch button** to switch the LCD to **Monitor mode**.

To switch the LCD from Monitor mode to **PC mode**, press the ↵ SOURCE **touch button** again.

For detailed information on a function, refer to the corresponding section of the User Manual.

Before You Start

Before reading the User Guide, first check the following information.

- Optional items, some devices and software referred to in the User Guide may not be provided and/or changed by upgrade.
  Note that the computer environment referred in the User Guide may not be the same as your own environment.
- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series and may differ from the actual appearance of the product.
- This manual describes the procedures for both the mouse and the touch screen.
- This manual has been written for the Windows operating system. The descriptions and figures may differ depending on the installed operating system.
- The User guide supplied with this computer may vary depending on your model.

Using the software

- The software described in the main text can be launched using the following menu path.
  - Start > All Programs
  - Start > All Programs > Samsung
  - For some programs, you can launch them by selecting **Start > All Programs > Samsung > Software Launcher.**
- When the programs are not installed, select **Samsung Recovery Solution > System Software** to install the programs. (Only for models supplied with Samsung Recovery Solution)

Safety Precaution Notations

Icon	Notation	Description
⚠	Warning	Failure to follow instructions marked with this symbol, may cause personal injury and or fatality.
!	Caution	Failure to follow instructions marked with this symbol, may cause slight injury to yourself or damage your property.

Text Notations

Icon	Notation	Description
!	Caution	Content included in this section includes information required about the function.
✎	Note	Content included in this section includes helpful information to use the function.

Copyright

The information in this document is subject to change without notice due to improving the performance of the product.

Samsung Electronics shall not be liable for any data loss. Please take care to avoid losing any important data and backup your data to prevent any such data loss.

Precautions for Operating System Support

If a problem occurs because of the reinstallation of other operating systems(OS) or a previous version of a OS pre-installed on this computer, or a software that does not support the OS, the company will not provide technical support, a replacement or refund, and if our service engineer visits you due to this problem, a service charge will be applied.

About the Product Capacity Representation Standard

About the capacity representation of the storage

The capacity of the storage device (HDD, SSD) of the manufacturer is calculated assuming that 1KB=1,000 Bytes.

However, the operating system (Windows) calculates the storage device capacity assuming that 1KB=1,024 Bytes, and therefore the capacity representation of the HDD in Windows is smaller than the actual capacity due to the difference in capacity calculation.
(E.g. For a 80GB HDD, Windows represents the capacity as 74.5GB, 80x1,000x1,000x1,000 byte/(1,024x1,024x1,024)byte = 74.505GB)

In addition, the capacity representation in Windows may be even smaller because some programs such as Recovery Solution may reside in a hidden area of the HDD.

About Memory Capacity Representation

The memory capacity reported in Windows is less than the actual capacity of memory.

This is because BIOS or a video adapter uses a portion of memory or claims it for further use.
(E.g. For 1GB(=1,024MB) memory installed, Windows may report the capacity as 1,022MB or less)

Safety Precautions

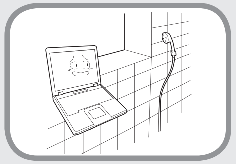
For your security and to prevent damage, please read the following safety instructions carefully.

Since this is commonly applied to Samsung Computers, some pictures may differ from actual products.

Warning

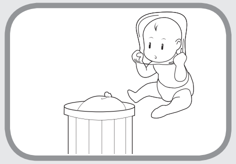
Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

Installation Related



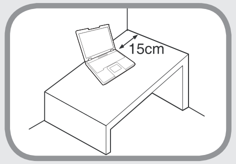
Do not install the product in places exposed to humidity such as a bathrooms.

There is a danger of electric shock. Use the product within the operating conditions specified in the Manufacturers User Guide.



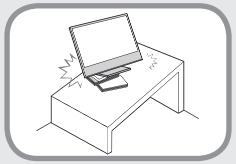
Keep the plastic bags out of the reach of children.

There is a danger of suffocation.



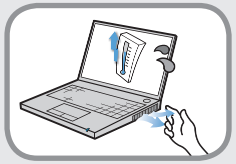
Keep a distance of 15cm or more between the computer and the wall and do not place any objects between them.

This may increase the internal temperature of the computer and may cause an injury.



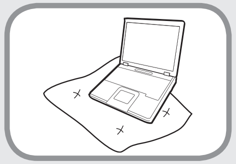
Do not install the computer on a slant or a place prone to vibrations, or avoid using the computer in that location for a long time.

This increases the risk that a malfunction or damage to the product will occur.



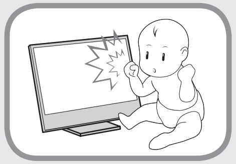
Avoid exposing any part of your body to the heat from the computer vent or AC adapter for a long time when the computer is on.

Exposing a part of your body close to the heat from the vent or AC adapter for long periods of time may cause a burn.



Avoid blocking the vent at the bottom or side of the computer when using it on a bed or cushion.

If the vent is blocked, there is a danger of damaging the computer or overheating the inside of the computer.



Do not let infants or children play near the computer.

The product may fall and cause an injury.

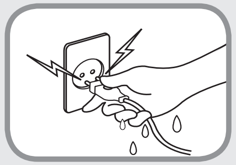
Safety Precautions

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

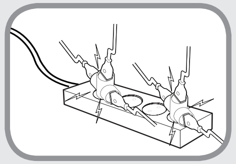
Power Related

The power plug and wall outlet figures may differ depending on the country specifications and the product model.



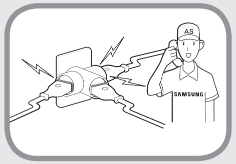
Do not touch the main plug or power cord with wet hands.

There is a danger of electric shock.



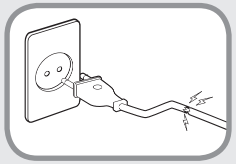
Do not exceed the standard capacity (voltage/current) of a multiplug or power outlet extension when using it for the product.

There is a danger of electric shock or fire hazard.



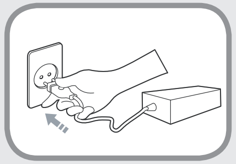
If the power cord or power outlet makes a noise, disconnect the power cord from the wall outlet and contact a service center.

There is a danger of electric shock or fire hazard.



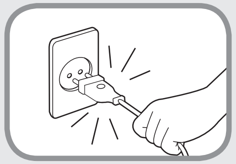
Do not use a damaged or loose main plug or power cord or power outlet.

There is a danger of electric shock or fire hazard.



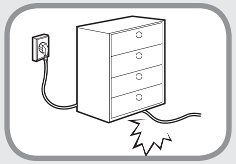
Plug the power cord firmly into the power outlet and AC adapter.

Failure to do so may cause fire hazard.



Do not unplug the power cord by pulling the cable only.

If the cord is damaged, it may cause electric shock.



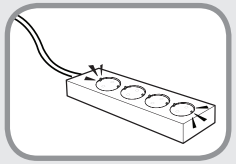
Do not bend the power cord excessively or do not place a heavy object over the power cord. It is especially important to keep the power cord out of reach of infants and pets.

If the cord is damaged, it may cause electric shock or fire.

Safety Precautions

Warning

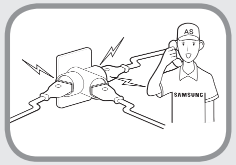
Failure to follow instructions marked with this symbol may cause personal injury and even fatality.



Connect the power cord to an outlet or multiple power plug (extended cable) with a ground terminal.

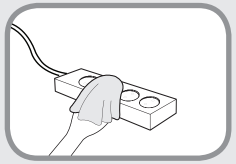
Failure to do so may result in electric shock.

When the power supply is ungrounded, the current may leak resulting in electric shock.



If water or another substance enters the power input jack, AC adapter or the computer, disconnect the power cord and contact the service center.

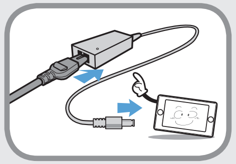
Damage to the device within the computer may cause electric shock or fire hazard.



Keep the power cord or outlet clean so that they are not covered with dust.

Failure to do so may result in fire.

AC Adapter Usage Precautions

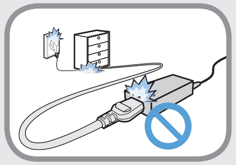


Connect the power cord to the AC adapter firmly.

Otherwise, there is a danger of fire due to an incomplete contact.

Use only the AC adapter supplied with the product.

Using another adapter may cause the screen to flicker.



Do not place heavy objects or step onto the power cord or AC adapter to avoid damaging the power cord or AC adapter.

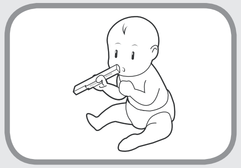
If the cord is damaged, there is a danger of electric shock or fire.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

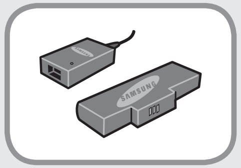
Battery Usage Related

Please charge the battery fully before using the computer for the first time.



Keep the battery out of the reach of infants and pets, as they could put the battery into their mouths.

There is a danger of electric shock or choking.



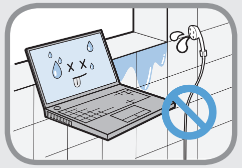
Use an authorized battery and AC adapter only.

Please use an authorized battery and adapter approved by Samsung Electronics.

Unauthorized batteries and adapters may not meet the proper safety requirements and may cause problems or malfunctions and result in an explosion or fire.

Do not use the computer in a badly ventilated location such as on bedding, on a pillow or cushion, etc, and do not use it in a location such as room with floor heating as it may cause the computer to overheat.

Take care that the computer vents (on the side or the bottom) are not blocked especially in these environments. If the vents are blocked, the computer may overheat and it may cause a computer problem, or even an explosion.



Do not use the computer in a humid location such as a bathroom or sauna.

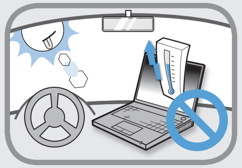
Please use the computer within the recommended temperature and humidity range (10~35ºC, 20~80% RH).

Do not close the LCD panel and put the computer into your bag to move it when it is still turned on.

If you put the computer into your bag without turning it off, the computer may overheat and there is a danger of fire. Shut the computer down properly before moving it.

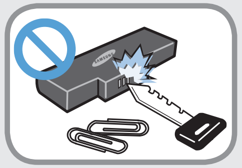
Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.



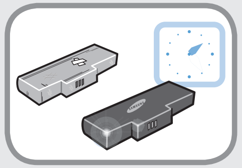
Never heat the battery or put the battery into a fire. Do not put or use the battery in a hot location such as a sauna, inside a vehicle exposed to the heat, and so on.

There is a danger of an explosion or fire.



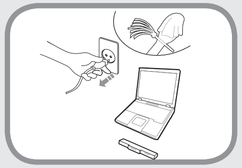
Take care not to allow metal objects such as a key or clip to touch the battery terminal (metal parts).

terminals, it may cause excessive current flow and it may damage the battery, or result in a fire.



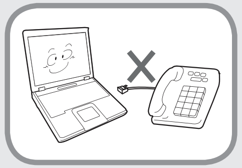
To use the computer safely, replace a dead battery with a new, authorized battery.

Usage Related



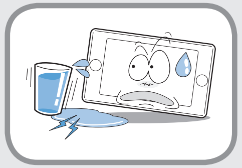
Disconnect all cables connected to the computer before cleaning it.

There is a danger of electric shock or damage to the product.



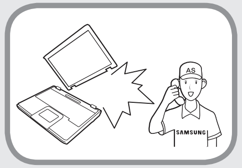
Do not connect a phone line connected to a digital phone to the modem.

There is a danger of a electric shock, fire or damage to the product.



Do not place any container filled with water or chemicals over or near the computer.

If water or chemicals enter the computer, this may cause fire or electric shock.

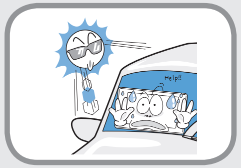


If the computer is broken or dropped, disconnect the power cord and contact a service center for a safety check.

Using a broken computer may cause electric shock or fire hazard.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.



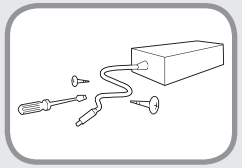
Avoid direct sunlight when the computer is in an air-tight location such as inside a vehicle.

There is a danger of a fire hazard. The computer may overheat and also present opportunity to thieves.

Do not use your PC for long periods of time while a part of your body is making direct contact with it. The temperature of the product may increase during normal operation.

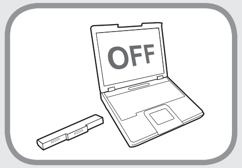
This may result in harming or burning your skin.

Upgrade Related



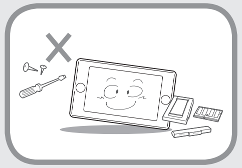
Never disassemble the power supply or AC adapter.

There is a danger of electric shock.



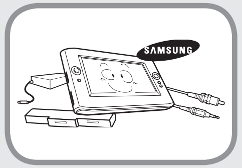
When removing the RTC (Real Time Clock) battery, keep it out of the reach of children as they could touch and/or swallow it.

There is a danger of choking. If a child has swallowed it, contact a doctor immediately.



Use only authorized parts (multi-plug, battery and memory) and never disassemble parts.

There is a danger of damaging the product, electric shock or fire hazard.



Shut down the computer and disconnect all cables before disassembling the computer.

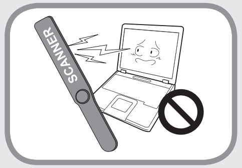
Failure to do so, may cause electric shock.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

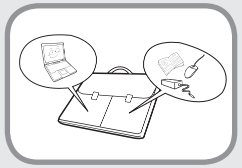
Security and Movement Related

Follow the instructions for the relevant location (e.g. airplane, hospital, etc.) when using a wireless communication device (wireless LAN, Bluetooth, etc.).



Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands.

The airport security devices that check carry-on luggage, such as conveyor belts, use x-rays instead of magnetism and will not damage a drive.



When carrying the computer with other items, such as the adapter, mouse, books etc, take care not to press anything against the computer.

If a heavy object is pressed against the computer, a white spot or stain may appear on the LCD. Therefore, take care not to apply any pressure to the computer.

In this case, place the computer in a separate compartment away from the other objects.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Installation Related

Do not block the ports (holes), vents, etc. of the product and do not insert objects.

Damage to a component within the computer may cause electric shock or fire.

When using the computer with it lying on its side, place it so that the vents face upwards.

Failure to do so, may cause the internal temperature of the computer to rise and the computer to malfunction or halt.

Do not place a heavy object over the product.

This may cause a problem with the computer. In addition, the object may fall and cause injury, or damage the computer.

Battery Usage Related

Dispose of worn-out batteries properly.

- There is a danger of fire or explosion.
- The battery disposal method may differ depending on your country and region. Dispose of the used battery in an appropriate way.

Do not throw or disassemble the battery and do not put it into water.

This may cause an injury, fire or explosion.

Use only a battery authorized by Samsung Electronics.

Failure to do so may cause an explosion.

Avoid contact with metal objects such as car keys or clips when keeping or carrying a battery.

Contact with a metal may cause excessive current and a high temperature and may damage the battery or cause a fire.

Charge the battery according to the instructions in the manual.

Failure to do so, may cause an explosion or fire from damage to the product.

Do not heat the battery or expose it to heat (e.g. inside a vehicle during the summer).

There is a danger of explosion or fire.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Usage Related

Do not place a candle, light cigar, etc. over or on the product.

There is a danger of fire.

Use a wall outlet or multi-plug with a grounding part.

Failure to do so may cause electric shock hazard.

Make sure to have the product tested by a safety service engineer after repairing the product.

Authorized Samsung Repair Centers will carry out safety checks after a repair. Using a repaired product without testing it for safety may cause an electric shock or fire.

In case of lightning, immediately turn the system off, disconnect the power cord from the wall outlet and phone line from modem. Do not use a modem or phone.

There is a danger of electric shock or fire.

Do not use your computer and AC-Adapter on your lap or soft surfaces.

If the computer temperature increases, there is a danger of burning yourself.

Connect only permitted devices to the connectors or ports of the computer.

Failure to do so, may cause electric shock and fire.

Do not press the Eject Button while the Floppy Disk/CD-ROM drive is in operation.

You might lose data and the disk might be suddenly ejected and could cause an injury.

Take care not to drop the product while using it.

This may cause personal injury or loss of data.

Do not touch the antenna with electricity facility such as the power outlet.

There is a danger of electric shock.

When handling computer parts, follow the instructions on the manual supplied with the parts.

Failure to do so, may cause damage to the product.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

If the computer emits smoke, or there is a burning smell, disconnect the power plug from the wall outlet and contact a service center.

There is a danger of fire.

Do not use a damaged or modified CD/Floppy Disk.

There is a danger of damaging the product or personal injury.

Do not insert your fingers into the PC Card Slot.

There is a danger of injury or electric shock.

Use recommended computer cleansing solution when cleaning the product and only use the computer when it is completely dried.

Failure to do so may cause electric shock or fire.

Emergency disk eject method using paperclip should not be used while the disk is in motion. Make sure to use the emergency disk eject method only when the Optical Disk Drive has stopped.

There is a danger of injury.

Do not place your face close to the Optical Disk Drive tray when it is operating.

There is a danger of injury due to an abrupt ejection.

Check CDs for cracks and damage prior to use.

It may damage the disc and cause disorder of device and injury of user.

Safety Precautions

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Upgrade Related

Take care when touching the product or parts.

The device may be damaged or you may be injured.

Take care not to throw or drop a computer part or device.

This may cause injury or damage to the product.

Make sure to close the computer cover before connecting the power after a reassembly.

There is a danger of electric shock if your body touches an internal part.

Use parts authorized by Samsung Electronics only.

Failure to do so, may cause fire or damage the product.

Never disassemble or repair the product by yourself.

There is a danger of electric shock or fire.

To connect a device that is not manufactured or authorized by Samsung Electronics, enquire at your service center before connecting the device.

There is a danger of damaging the product.

Security and Movement Related

When moving the product, turn the power off and separate all connected cables first.

The product might be damaged or users may trip over the cables.

Do not operate or watch the computer while driving a vehicle.

There is a danger of a traffic accident. Please concentrate on driving.

Safety Precautions

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Cautions on Preventing Data Loss (Hard Disk Management)

Take care not to damage the data on a hard disk drive.

- A hard disk drive is so sensitive to external impact that an external impact may cause loss of data on the surface of the disk.
- Take extra care, because moving the computer or an impact on the computer when it is turned on may damage the data of the hard disk drive.
- The company is not liable for any loss of data on the hard disk drive.

Causes that may damage the data of a hard disk drive and the hard disk drive itself.

- The data may be lost when an external impact is applied to the disk while disassembling or assembling the computer.
- The data may be lost when the computer is turned off or reset by a power failure while the hard disk drive is operating.
- The data may be lost and irrecoverable due to a computer virus infection.
- The data may be lost if the power is turned off while running a program.
- Moving or causing an impact to the computer while the hard disk drive is operating, may cause files to be corrupted or bad sectors on the hard disk.

To prevent data loss due to damage to the hard disk drive, please backup your data frequently.

Proper Posture During Computer Use

Maintaining a proper posture during computer use is very important to prevent physical harm.

The following instructions are about maintaining a proper posture during computer use developed through human engineering. Please read and follow them carefully when using the computer.

Otherwise, the probability of (RSI: Repetitive Strain Injury) from repeated operations may increase and serious physical harm may be caused.

- The instructions in this manual have been prepared so that they can be applied within the coverage of general users.
- If the user is not included in the coverage, the recommendation is to be applied according to the user's needs.

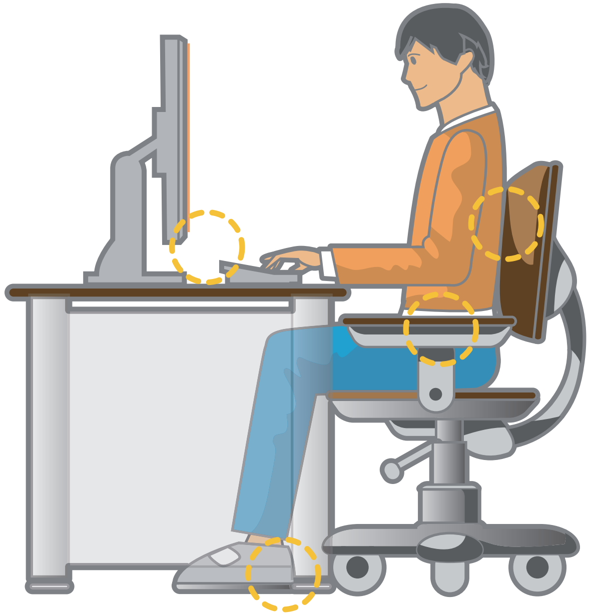
Proper Posture

Adjust the heights of desks and chairs appropriate to your height.

The heights are to be adjusted so that your arm forms a right angle when you place your hand over the keyboard while sitting down on a chair.

Adjust the height of chair so that your heel is comfortably placed on the floor.

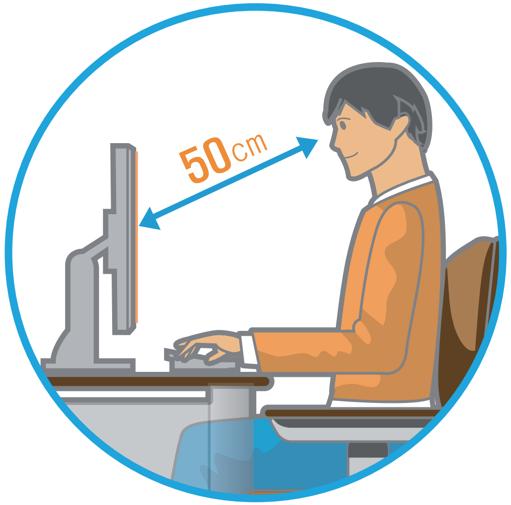
- Do not use the computer while you are lying down, but only while you are sitting down.
- Do not use the computer on your lap. If the computer temperature increases, there is a danger of burning yourself.
- Work while keeping your waist straight.
- Use a chair with a comfortable back.
- Keep the center of your leg weight not on the chair but on your feet when you are sitting on a chair.
- To use the computer while talking over the telephone, use a headset. Using the computer with the phone on your shoulder is bad for posture.
- Keep frequently used items within a comfortable work range (where you can reach them with your hands).



Proper Posture During Computer Use

Eye Position

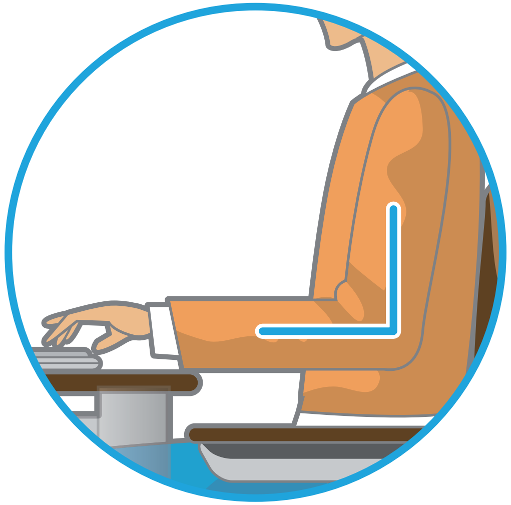
Keep the monitor or LCD away from your eyes by at least 50cm.



- Adjust the height of the monitor and the LCD screen so that its top height is equal to or lower than your eyes.
- Avoid setting the monitor and LCD excessively bright.
- Keep the monitor and LCD screen clean.
- If you wear glasses, clean them before using the computer.
- When entering contents printed on a paper into the computer, use a static paper holder so that the height of the paper is almost equal to that of the monitor.

Hand Position

Keep your arm at a right angle as shown by the figure.



- Keep the line from your elbow to your hand straight.
- Do not place your palm over the keyboard while typing.
- Do not hold the mouse with excessive force.
- Do not press the keyboard, touchpad or mouse with excessive force.
- It is recommended connecting an external keyboard and mouse when using the computer for long periods of time.

Proper Posture During Computer Use

Volume Control (Headphones and Speakers)

Check your volume first to listen to music.

Check your volume!

- Check if the volume is too loud before using headphones.
- It is not recommended using headphones for long periods of time.
- Any deviation from the equalizer default setting could cause hearing impairment.
- The default setting can be changed through software and driver updates without your intervention. Please check the equalizer default setting before first usage.

Use Time (Break Time)

- Take a break for 10 minutes or more after a 50-minute period when working for more than one hour.

Illumination

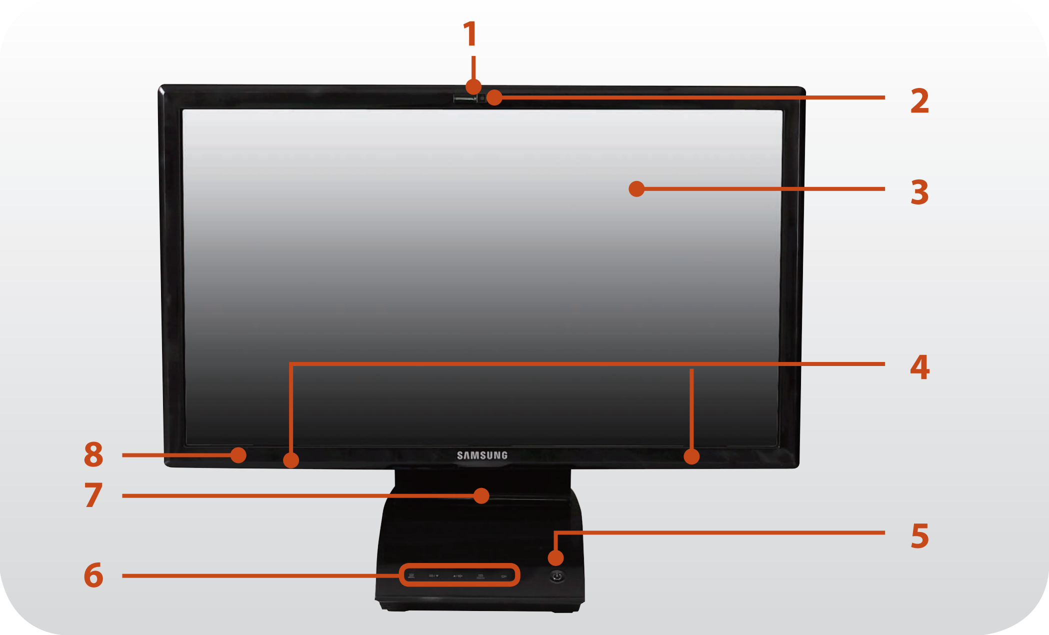
- Do not use the computer in dark locations. The illumination level for computer use must be as bright so for reading a book.
- Indirect illumination is recommended. Use a curtain to prevent reflection on the LCD screen.

Operation Condition

- Do not use the computer in hot and humid locations.
- Use the computer within the allowed temperature and humidity range specified in the User Guide.

Front View

- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series. Therefore the colors and appearance of the pictures may differ from the actual appearance of the product depending on the model.
- The actual color and appearance of the computer may differ from the pictures used in this guide.



1	**Camera operating indicator**	This indicates the camera operating status.
2	**Camera**	Using this camera, you can take still pictures and record video.
3	**LCD**	The screen images are displayed here.
4	**Speaker**	A device used to generate sound.
5	**Power Button ⏻/I**	Turns the computer on and off.
6	**Touch buttons (for corresponding models only)**	You can use the functions by lightly touching the sensor buttons with your fingers.
7	**Remote Control Sensor (Optional)**	If a user presses a button on the remote control, the sensor detects the signal from the remote control and the computer performs the corresponding action. ! When using the remote control, take care not to block the sensor. If the sensor is blocked, the remote control will not function.
8	**Microphone**	You can use the built-in microphone.

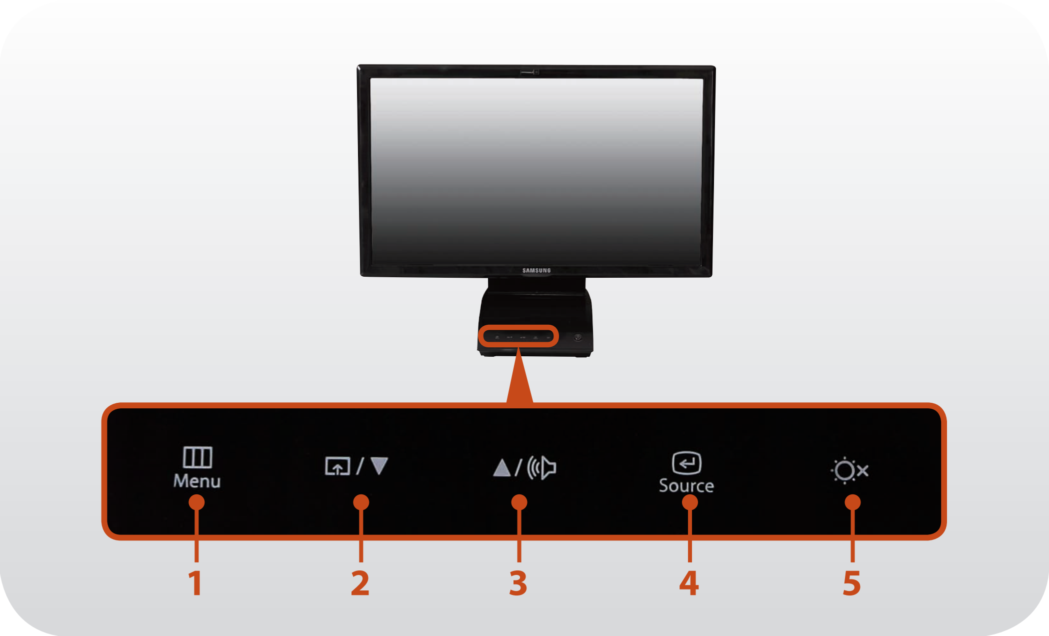
Using the camera, web cam

Using the Cyberlink YouCam program (optional), you can take pictures or record video by using the computer's built-in camera by adding the balloon talk or frame effect.

Touch buttons (for corresponding models only)

Some touch buttons may not be provided depending on the model specifications.

If you touch the sensor, the touch button works.



1	▥ MENU	Menu	Shows or hides the screen settings OSD.
2	▣/▼	Screen Settings	The menu of the mode selected by the user pressing the ⏎ SOURCE button is supported. The <MagicBright>, <MagicAngle>, <MagicEco> and <Screen Size> menus are supported. **<MagicBright>**: You can choose the optimal screen settings for a movie or game. The <Custom>, <Standard Screen>, <Game>, <Movie> and <Video Contrast Setting> screen modes are supported. **<MagicAngle>**: You can choose the optimal screen settings for your viewing angle. If you configure this setting when you watch the screen from above, below or the side of the screen, you can view the screen as if you were directly in front. **<MagicEco>**: This mode provides power-saving mode by decreasing the current to the display panel. **<Screen Size>**: This mode provides various screen size options. The terms in this manual may differ from the actual terms displayed on the screen.

3	▲/🔊	Volume Control	Launches the volume control menu. When the volume control menu is running, press ▲/🔊 to turn the volume up or press ▭/▼ to turn the volume down.
4	⏎ SOURCE	Mode Selection	Switches to PC mode or monitor mode. **PC Mode**: The mode that maintains the screen of this product. **Monitor Mode**: The mode used when this product is used as a monitor. Source is used to switch between PC and Monitor modes when the system is in use.
5	☼×	LCD On/Off	Turns the LCD on or off. For models that support monitor mode, this button turns both the LCD and the speaker on or off at the same time. When the system is hibernating or shutdown, press the LCD on/off button to use the product in Monitor mode.

- To use the touch buttons, **Easy Settings** must be installed.
- The Brightness Control and Volume Control menus cannot run at the same time.

Caution when using the touch buttons

- You can only use the touch buttons when the computer is turned on.
- Touch the touch buttons with clean, dry hands.

  In a humid environment, use the buttons after first removing moisture from your fingers or the touch buttons.
- Since the touch buttons will work even if you do not press them hard, do not press them excessively.

  Since a serious impact may damage the sensor in the touch button, take care when using the buttons.
- Do not press the buttons with sharp objects such as a stylus pen, ball-point pen, etc. Sharp objects may damage the touch buttons.
- When you touch the touch buttons, take care not to touch another button so that your finger tip touches the touch buttons precisely corresponding to the required function.
- When you are wearing gloves or the touch buttons are covered with plastic packaging or some kind of protective covering, the touch buttons may not work properly.
- If a conductive object such as a metal object makes contact with the touch buttons, the touch buttons may malfunction. Therefore, take care not to touch the touch buttons with a conductive object.

The touch buttons do not work

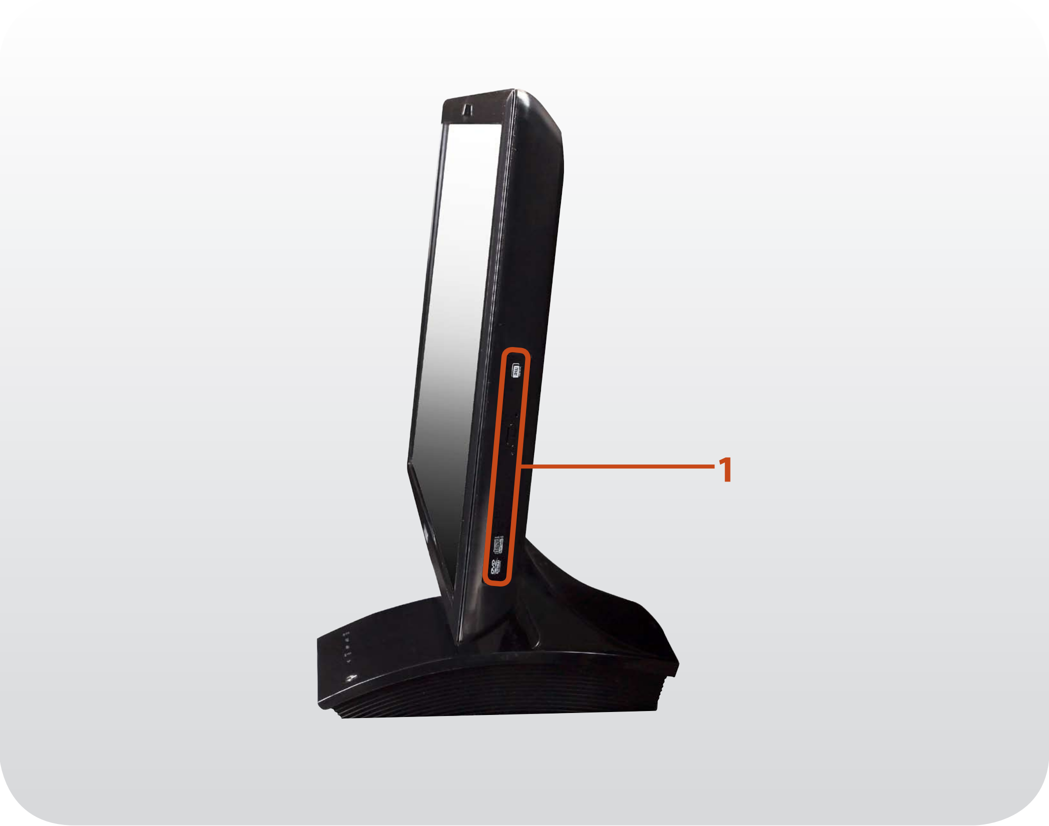
The touch buttons only work when **Easy Settings** Manager is installed.

When the touch buttons do not work, check the following.

1. Right-click over the **Taskbar**, select **Start Task Manager** and the **Process** tab, and check if **EasyButtonManager.exe** is running.
2. If you cannot find **EasyButtonManager.exe** in the **Process** tab of the **Task Manager**, run **C:\ProgramFiles\Samsung\Easy Settings\EasyButtonManager.exe**.
3. If **EasyButtonManage.exe** is not in the path above, select **Samsung Recovery Solution (for models with the program only) > System Software** to reinstall **Easy Settings**.
4. You can also download the **Easy Settings** program from the www.samsung.com download center.

Overview

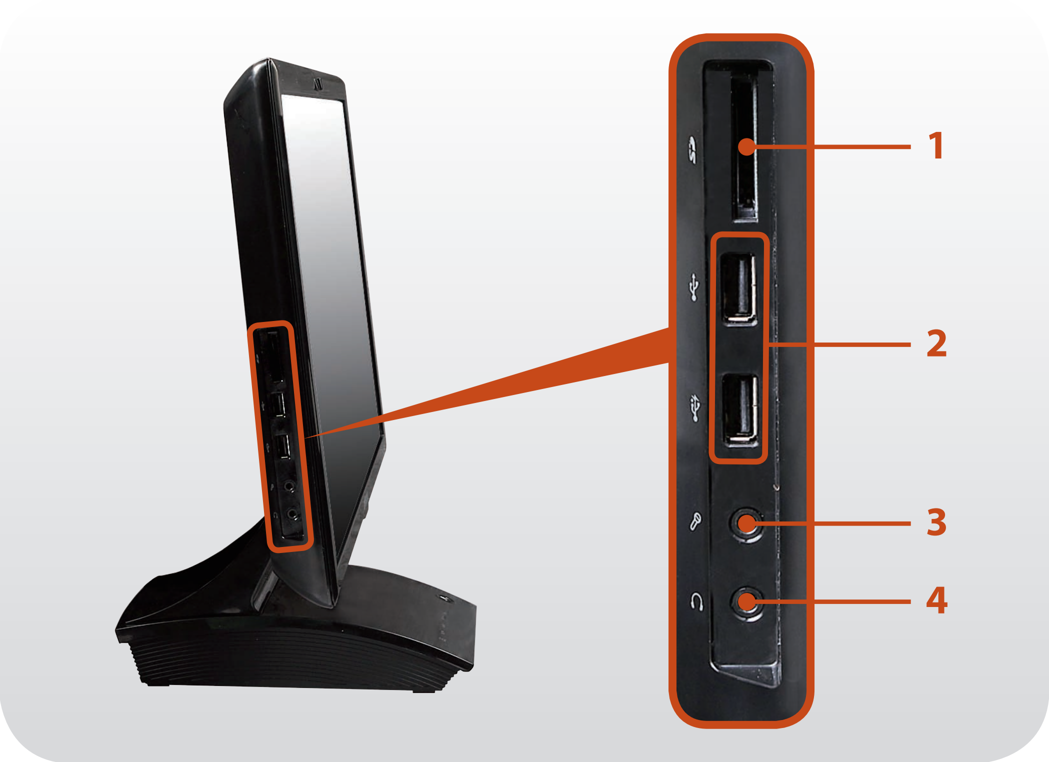
Right View



1	**CD Drive (ODD) (Optional)**	Plays CD or DVD titles. A CD Drive is optional. The installed drive may differ depending on the model specifications.

Overview

Left View

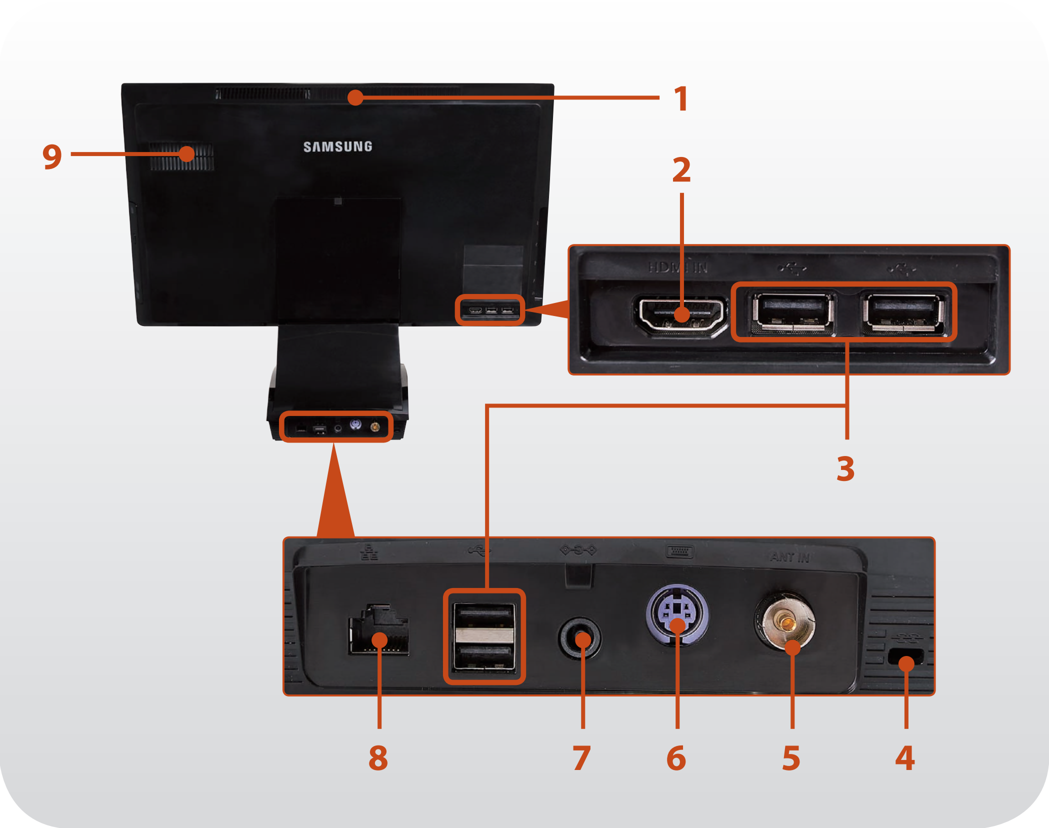


1	**Multi Card Slot**	A card slot supports multi cards.
2	**USB Port or Chargeable USB Port (Optional)**	This port is used as a USB port or chargeable USB port. Using a chargeable USB port, you can access or charge a USB device. You can tell the ports apart using the figures printed on the ports or by the colors. USB port: black Chargeable USB Port: black USB 3.0 port: blue Chargeable USB 3.0 port: blue
3	**Microphone Jack**	A jack used to connect the microphone.
4	**Headphone Jack**	A jack used to connect the headphones.

What is a chargeable USB port?

- USB device accessing and charging functions are supported.
- The USB charging function is supported regardless of whether the power is turned on or off.
- The USB charging function can be turned-ON/OFF via the **Easy Settings**. (Optional)
- Charging a device through a chargeable USB port may take longer than general charging.
- The user cannot evaluate the charging status of the USB device from the computer.
- This may not be supported for some USB devices.

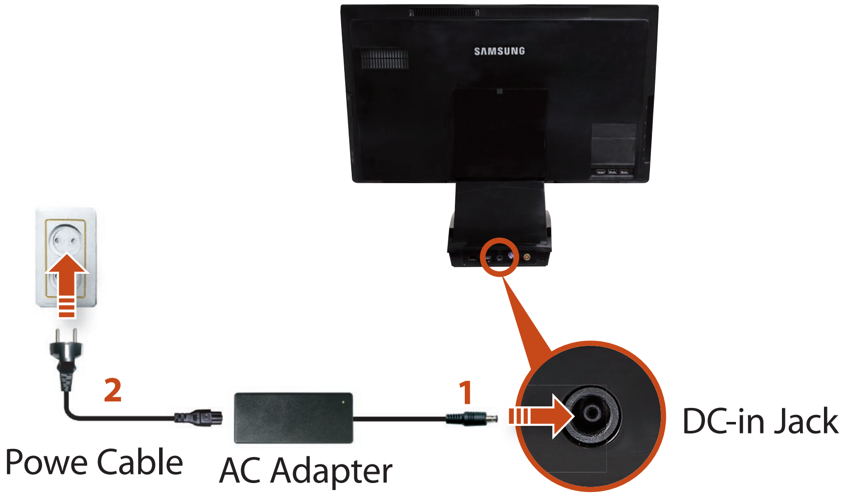
Back View



1	Fan Vents	The internal heat of the computer is emitted through these holes. If the vents are blocked the computer may overheat. Avoid blocking the vents as this may be dangerous.
2	Digital Video/ Audio Input Port (HDMI-IN) (Optional)	You can connect an HDMI cable to this port. You can connect the HDMI port to a device with an HDMI output port and use this product as a monitor with digital video and audio output from the device.
3	USB Port	You can connect USB devices to the USB port such as a keyboard/mouse, digital camera, etc.
4	Security Slot	You can secure the computer by connecting a lock and cable to the Security Slot.
5	TV Antenna Input Port (Optional)	You can watch TV by connecting the antenna cable. Only for models with a TV tuner card. The shape of the port may differ depending on the country.
6	Keyboard Port (PS/2 Type)	You can connect a PS / 2 type keyboard here.
7	DC Jack	A jack to connect the AC adapter that supplies power to the computer.
8	Wired LAN Port	Connect the Ethernet cable to this port.
9	Sub-Woofer Speaker (Optional)	A device used to produce mid and low frequency sound louder.

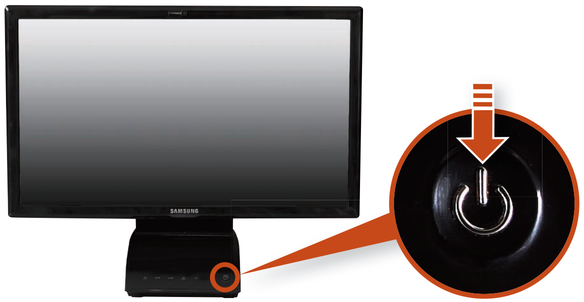
Turning the computer on

1 Connect the **AC adapter**.



2 Press the **Power button** to turn the computer on.

Power indicator is lit while the computer is turned on.



About Windows Activation

When you turn the computer on for the first time, the Windows activation screen appears.

Follow the activation procedures according to the instructions on the screen to use the computer.

If the screen is not displayed when you turn the computer on (for corresponding models only)

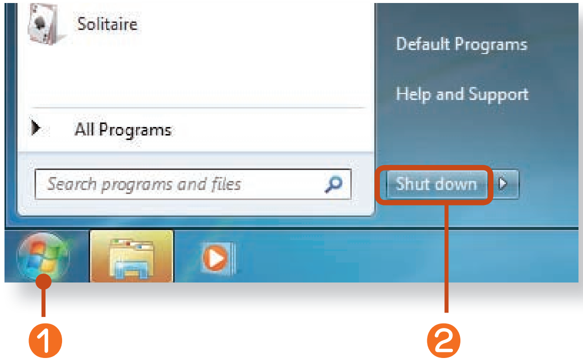
- Press the **touch button** ☼✕ to turn the LCD on.
- If "HDMI" message is displayed on the screen, press the **touch button** ⏎ SOURCE to switch the LCD panel to the **PC mode**.

Turning the Computer On and Off

Turning the computer off

- Since the procedures to turn the computer off may differ depending on the installed operating system, please turn the computer off according to the procedures for the purchased operating system.
- Save all your data before clicking on **Shut down**.
- If **Easy Settings** is installed, the system shutdown location may differ.

Click ① **Start** > ② **Shut down mode** Shut down to shutdown the computer.



If the computer cannot be shut down due to a system error, press and hold the power button for at least 4 seconds to shut it down by force.

Please note that the system diagnosis program may run when you turn the computer on after shutting the computer down by force by holding the power button down.

Chapter 2.
Using the computer

Using a wired keyboard and mouse

The appearance and color of the keyboard may differ depending on the model.

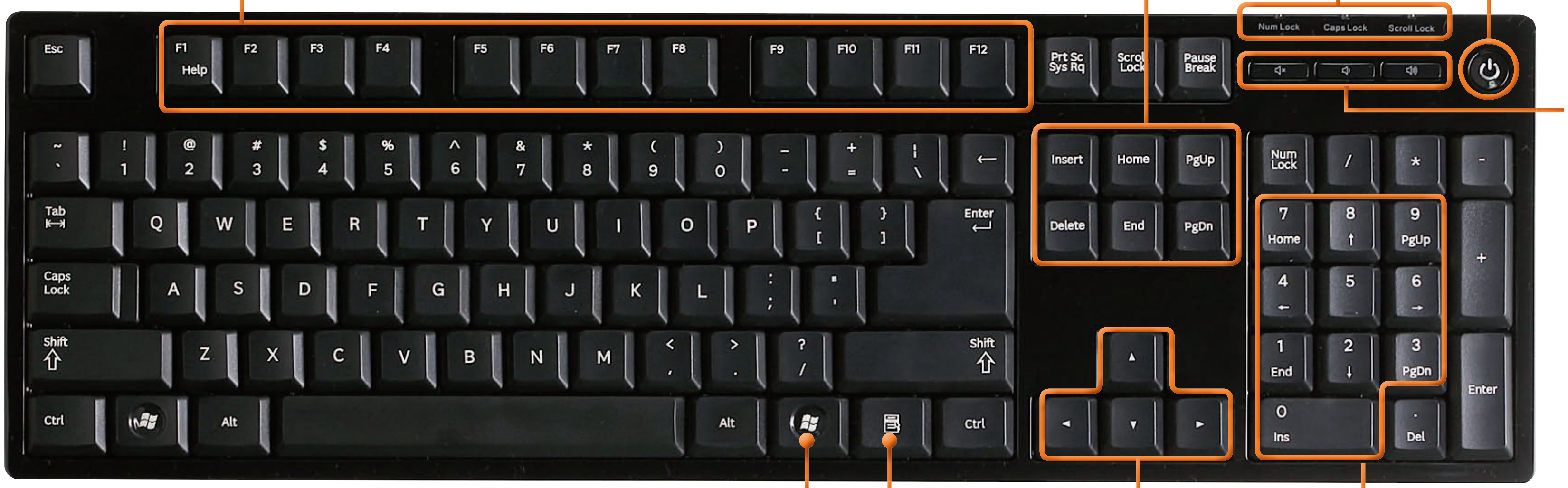
Function keys
Execute various program functions. The roles of the buttons differ depending on the application that is running.

Utility keys
Move the cursor to the previous or next page or to the beginning or end of a line to enable deleting, inserting and modifying the letters.

Lamps
Indicates that the Num Lock, Caps Lock or Scroll Lock keys are set or not.

Power key
This button is used to turn the computer on and off.

Volume keys
These buttons are used to turn the sound on or off and control the volume.



Windows keys
Show the Windows start menu.

Application key
Performs the right-clicking function of the mouse.

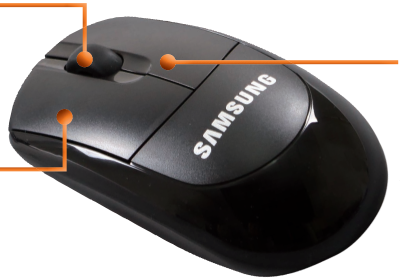
Directional keys
Moves the cursor up, down, left or right.

Numeric keys
If the Num Lock key is pressed, the Num Lock lamp is turned on and the numeric keys are enabled.

Using a wired keyboard and mouse

A mouse is a device that is used to move the cursor or pointer on the screen.

The appearance and color of the mouse may differ depending on the model.



Wheel button

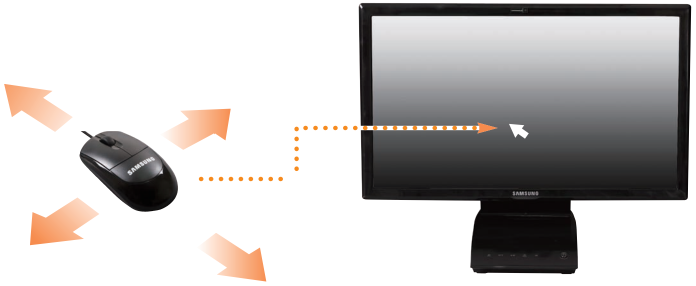
Moves the pointer up and down.

Left button

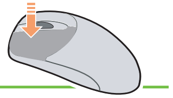
Selects and launches an item.

Right button

Shows the context-sensitive menus of programs.



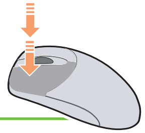
If you move the mouse, the pointer on the screen moves in the same direction.



Click function

Briefly press the left mouse button once.

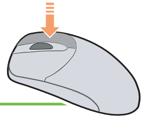
If you click this mouse button once, the corresponding program is selected.



Double-click function

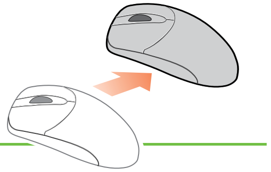
Quickly press the left mouse button twice.

The corresponding program is launched.



Right click function

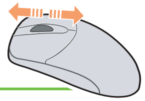
If you click this mouse button once, the context-sensitive menu of the current program appears.



Drag function

Dragging refers to clicking an item and moving the item to another position while holding the mouse button down.

Click the left mouse button over an item to be dragged and move the item to the new position while holding the mouse button down.



Scroll function

If you turn the wheel button up or down, the screen moves up or down accordingly.

Using a wireless keyboard/mouse (Optional)

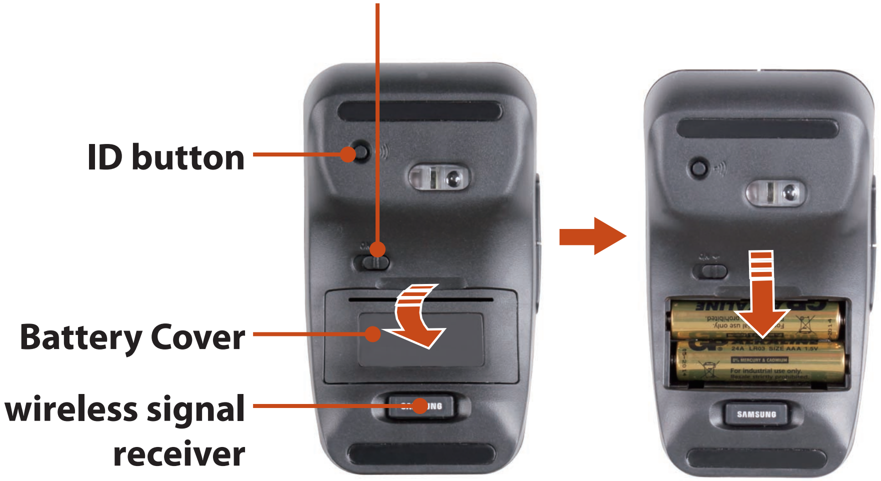
The wireless keyboard and mouse are optional and the appearance and the color of the provided keyboard and mouse may differ depending on the model.

1 Open the Battery Cover at the bottom and insert the battery in the right **polarity** (+,-).

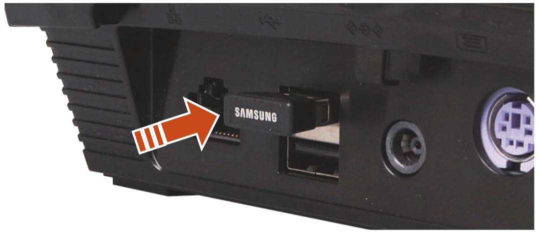
Example) Wireless mouse

Power switch

If you set this switch to the **OFF** position when not using the mouse, you can save battery power.

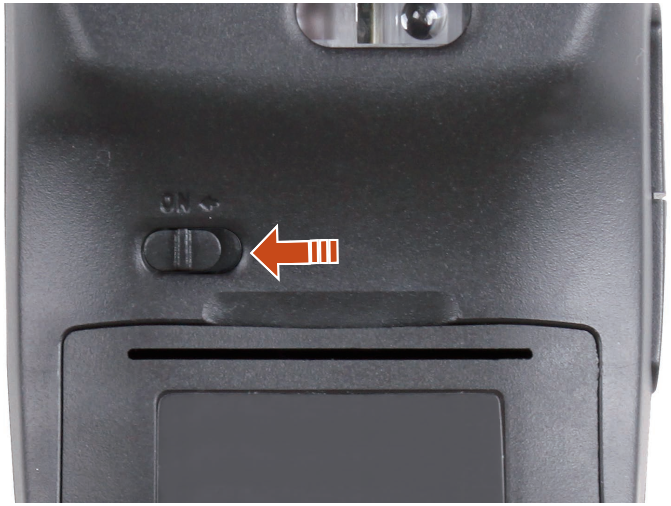


2 Insert the wireless signal receiver into the **USB port** at the back or side of the computer.



3 Slide the power switch at the bottom of the mouse to the **ON** position.

Example) Wireless mouse



4 You can use the wireless keyboard and the mouse without additional settings.

- You can use the wireless keyboard and the wireless mouse within a 5m distance of the wireless signal sensor.
- The distance is subject to the surroundings and if there is interference nearby, in particular a wireless LAN AP, the distance may be decreased.

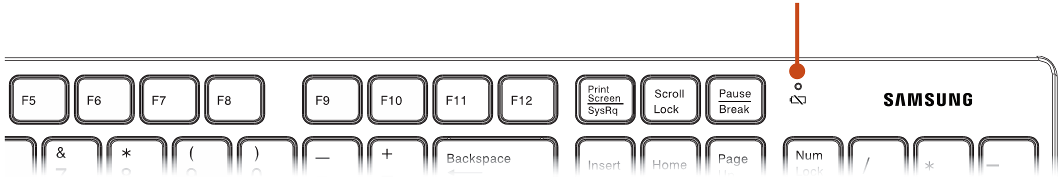
Using a wireless keyboard/mouse (Optional)

Wireless keyboard

Battery replacement LED

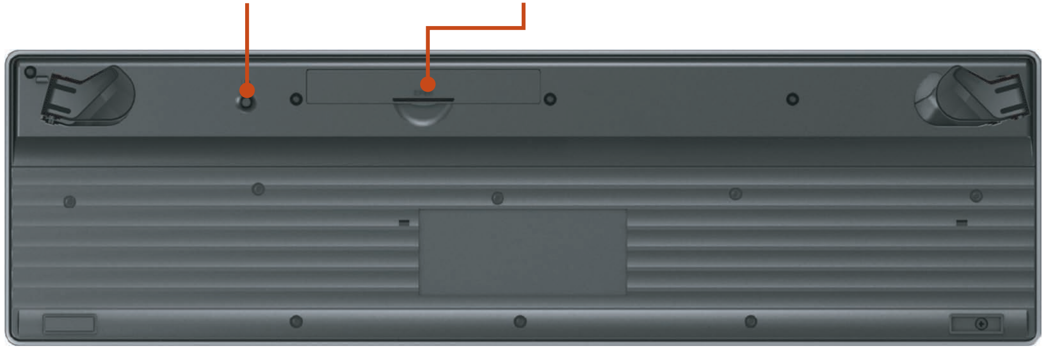
This indicates when it is time to replace the battery.

If the LED blinks, replace the batteries.

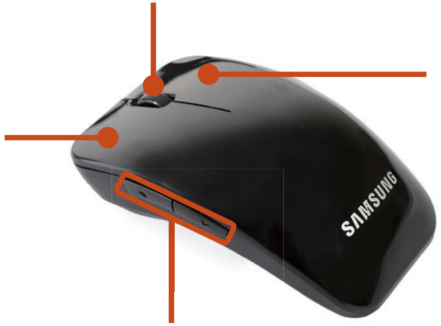


ID button

Battery cover



Using a wireless keyboard/mouse (Optional)



Wheel button

Moves the pointer up and down.

Right button

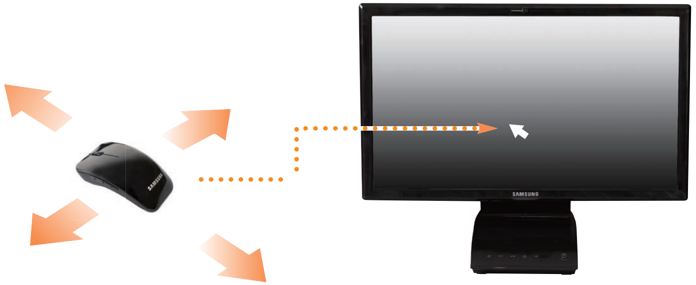
Shows the context-sensitive menus of programs.

Left button

Selects and launches an item.

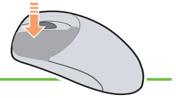
Navigation buttons

Go to the previous/next page in Internet Explorer.



If you move the mouse, the pointer on the screen moves in the same direction.

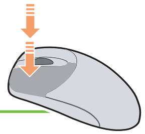
Click function



Briefly press the left mouse button once.

If you click this mouse button once, the corresponding program is selected.

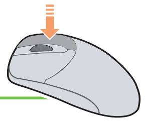
Double-click function



Quickly press the left mouse button twice.

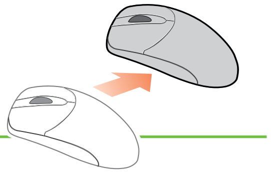
The corresponding program is launched.

Right click function



If you click this mouse button once, the context-sensitive menu of the current program appears.

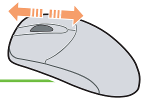
Drag function



Dragging refers to clicking an item and moving the item to another position while holding the mouse button down.

Click the left mouse button over an item to be dragged and move the item to the new position while holding the mouse button down.

Scroll function



If you turn the wheel button up or down, the screen moves up or down accordingly.

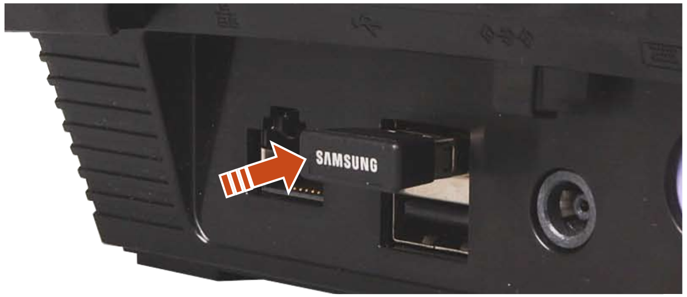
Using a wireless keyboard/mouse (Optional)

If the wireless keyboard does not work

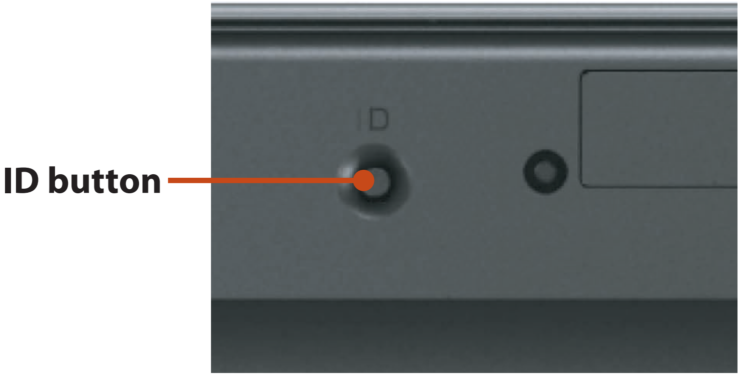
- Check the batteries.
  For a keyboard, check if the low battery indicator 🪫 at the top right front of the device is turned on.
  If the LED is on, you need to replace the battery.

- Check the status of the wireless signal receiver.

1 Disconnect the wireless receiver from the main body and then reconnect it.



2 Within 10 seconds of reconnecting the receiver, press and hold the ID button for 2~3 seconds and then release it near the wireless receiver.



3 Check if the device works properly.

Using a wireless keyboard/mouse (Optional)

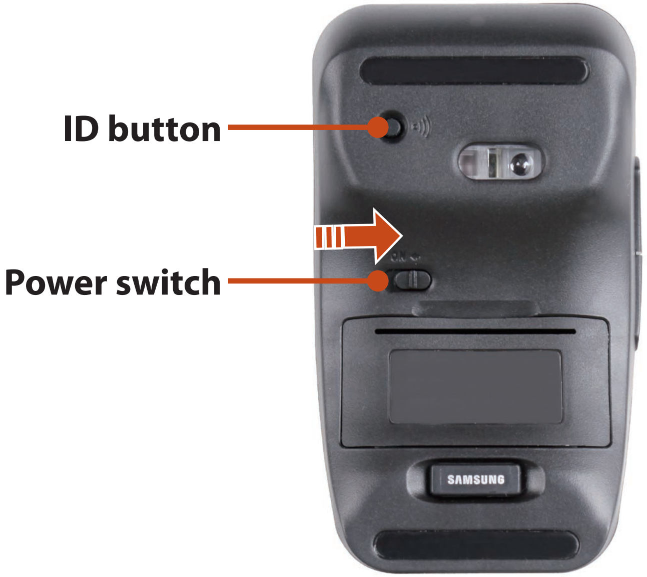
If the wireless mouse does not work

- ▶ When the power switch at the bottom of the mouse is in the **OFF** position, the mouse does not work.
  Turn the switch to the **ON** position.

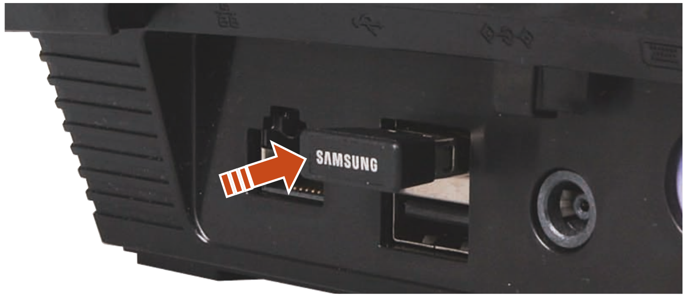
- ▶ Check the batteries.

- ▶ Check the status of the wireless signal receiver.

1 Set the power switch at the bottom of the mouse to the **OFF** position.



2 Disconnect and then reconnect the wireless signal receiver to the main body.



3 Set the power switch at the bottom of the mouse to the **ON** position.

4 Within 10 seconds of reconnecting the receiver, press and hold the ID button for 2~3 seconds near the receiver.

CD Drive (ODD, Optional)

An optical disk drive is optional and may differ depending on your computer model. For detailed specifications, refer to the catalogue.

- Do not insert a cracked or scratched CD.

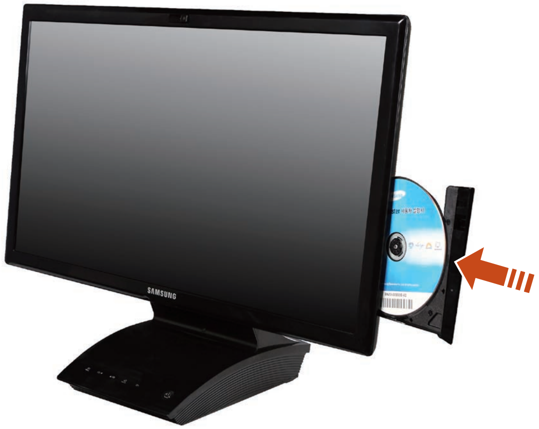
  Otherwise, the CD may break and damage the optical disk drive when the CD rotates at a high speed.
- When you clean a CD or DVD title, wipe with a soft cloth from inside to outside.
- Do not hold a CD by touching the bottom of the CD.

  Hold a CD by touching the center and the outer rim of the CD. A CD contaminated by a foreign substance may result in the CD not being recognized properly.
- Using a CD that is not in the shape of a circle is not recommended.

A CD drive’s reading and writing speed may differ depending on the condition and type of the media.

Inserting and Ejecting a CD

1 Insert the disc into the CD Drive so that the top of the disc faces upwards.
When 90% of the disc is inserted into the drive, the disc is automatically loaded into the drive.



- Do not pull or push the disc by force when the disc is being automatically ejected or inserted. This may cause a problem when ejecting or inserting a disc.
- To insert a disc, insert the disc into the center of the drive with the appropriate pressure. If you insert a disc and apply excessive force to one side of the tray, it may result in a problem.
- If you eject the disk before the disk is completely recognized, ejecting the disk may take longer.

2 To eject a disc, click **Start** > **Computer** and right-click over the **CD drive** and select **Eject**.
Alternatively, press the Eject button ⏏ of the **CD drive**.
The disc stops and is ejected from the **CD drive**.

Multi Card Slot

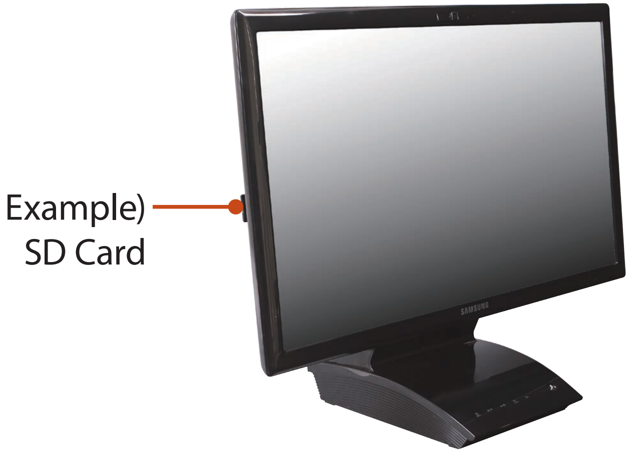
Using the multi card slot, you can read and write data to cards.

You can use a card as a removable disk and conveniently exchange data with digital devices such as a digital camera, digital camcorder, MP3, etc..

- Supported Cards : SD Card, SDHC card, SDXC card
- You have to additionally purchase a multi card with the necessary capacity depending on your requirements.
- You can use a multi card just like any data storage device. A copyright protection function is not supported.
- Since you can lose a card when moving the computer, keep the card separately.
- The figures used for the description are of a representative model. Therefore the figures may differ from the real ones.

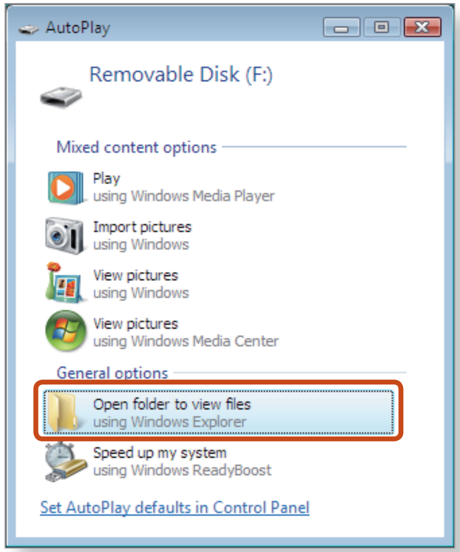
Using the card

1 Insert the card into the multi card slot in the indicated direction.



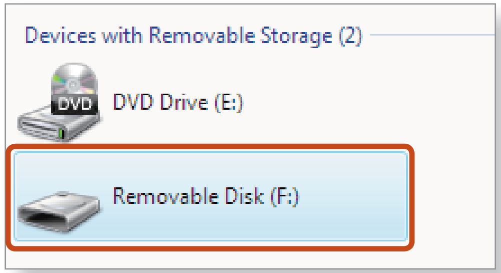
2 The card drive appears. Click **Open folder and view files**.

If the window does not appear, click **Start > Computer**.



If a window asking to scan and change appears, click **Continue Without Scanning**. This will proceed to Step 2 above.

3 You can save, move and delete data by double-clicking the corresponding drive.



The device name of the card drive may differ depending on your computer model.

You can only use the card after formatting it.

Using a Mini SD

Since the above cards are too small, you cannot insert the cards into the slot directly.

Insert the card into the dedicated adapter (available from most electronic retailers) and then insert the adapter into the multi card slot.

Multi Card Slot

To remove a memory card

Take hold of the end of the card and remove the card.

To format a memory card

When using the memory card for the first time, you must format the card before using it.

Formatting a card deletes all data saved on the card. If the card includes data, backup the data before formatting it.

1. Click **Start > Computer**.

2. Right-click over a card drive with the touchpad and select **Format**.

3. Click **Start** to the formatting.

- To use a card to exchange data with a digital device such as a digital camera, formatting the data using the digital device is recommended.
- When you try to use a card, which is formatted in the computer, in another digital device, you may have to format the card again in the device.
- You cannot format, write or delete data from a SD, or SDHC card with a write protection tab when it is in the Lock position.
- Inserting and removing a memory card repeatedly may damage the memory card.

Using the product as a monitor (Optional)

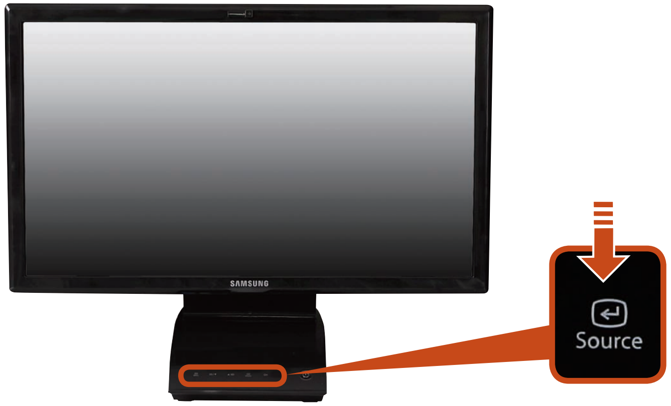
The LCD screen of this product can be used as a monitor using the Digital Video/Audio Input Port (HDMI-IN).

Try using this product as a monitor by connecting an HDMI device such as a computer, gaming console, DVD player and so on.

Using the product as a monitor

1 Connect the external device (HDMI output port) and this product (digital video/audio input port (HDMI-IN)) with the HDMI cable.

2 Press the **touch button** SOURCE to switch this product to **monitor mode**.



You can only use monitor mode by connecting the Digital Video/Audio Input Port (HDMI-IN). The Digital Video/Audio Out Port (HDMI-OUT) is for output only.

- As long as the power cord is connected, you can use the LCD of the product as a monitor even when the product is off.
- Even if the product is switched to monitor mode by pressing the SOURCE button during an operation, the operating system is not terminated. Press the SOURCE button again to return to PC mode.
- If the product is switched to monitor mode, the audio is also switched accordingly.
- If no picture is displayed on the LCD screen when the product is switched to monitor mode, disconnect and then reconnect the HDMI port.
- Source is used to switch between PC and Monitor modes when the system is in use.
- When the system is hibernating or shutdown, you can switch the mode using the LCD on/off button.

Returning to PC mode

To return to PC mode from monitor mode, press the SOURCE touch button.

Connecting an External Digital Device

You can save a file stored on a device onto the computer by connecting a digital device such as a camera, camcorder or mobile phone to the computer and using the file management functions.

Connecting and using a camera or camcorder

If a digital device such as a camera or camcorder is connected with the computer, it is recognized as a removable disk so that you can copy or move the files on the device.

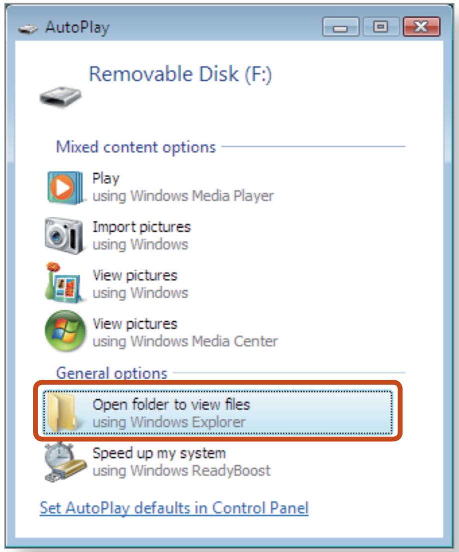
1 Connect the USB port of the notebook computer and the USB port of the digital device such as a camera using the USB cable.

- Both the computer and the digital device must be turned on.
- You have to additionally purchase the USB cable necessary to connect the computer and the device.

Camera
Camcorder

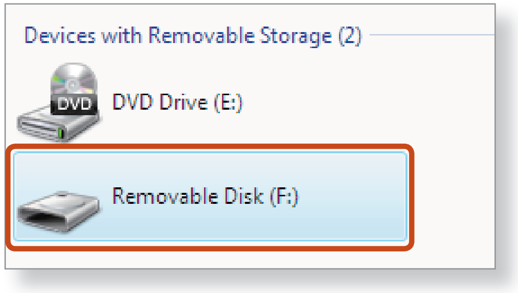
2 The **Auto run** window appears. Click **Open folder and view files**.

If the window does not appear, click **Start > Computer**.



Connecting an External Digital Device

3 Double-click the corresponding drive. You can then save, move or delete data.



Devices with Removable Storage (2)

DVD Drive (E:)

Removable Disk (F:)

The device name of the card drive may differ depending on the model.

Adjusting the Volume

You can adjust the volume using the keyboard and the volume control program.

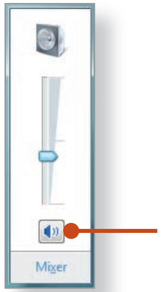
Adjusting the Volume

Adjusting the Volume using the touch button (for corresponding models only)

Press the ▲/🔊 **touch button** once and then adjust the sound by pressing ▲/🔊 or ⌂/▼ .

Adjusting the Volume using the Volume Adjustment Program

Click the Volume icon 🔊 on the taskbar and slide the volume control bar to adjust the volume.



Using the Sound Recorder

The procedures to record sound using the Windows Recorder are described below.

1. Connect a microphone to the microphone jack.

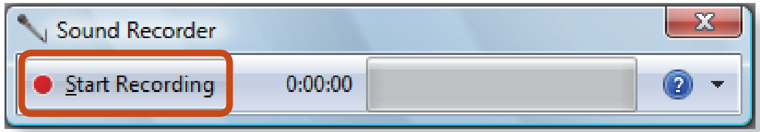
   You can also use the internal MIC.

2. Right-click over the **Volume** icon 🔊 on the taskbar and select **Recording Device**.

3. Check if the microphone is set as the default recording device.

   If this is the case, it is already set as the default device. If not, right-click over the microphone and select **Set default**.

4. Click **Start > All Programs > Accessories > Sound Recorder** and click **Start recording** to start a recording.



Adjusting the Volume

Using SoundAlive (Optional)

The SoundAlive function enables you to experience more stereophonic sound using stereo speakers.

- SoundAlive is only supported in Windows 7.
- The software programs provider may vary, depending on your computer model.
- In addition, some pictures may differ from actual product depending on the computer model and software version.

1 Right-click over the **Volume Control** icon 🔊 in the notification area at the bottom right of the Desktop and select **Playback Devices**. (Alternatively, click the **Control Panel > Hardware and Sound > Sound**.)

2 Right-click over the **Speakers** and select **Properties**.

3 Select the **SoundAlive** tab and select one of the modes.

▶ Basic Mode

Music	Select this mode to listen to music.
Movie	Select this mode to watch a movie.
Speech	Emphasizes voice over other sounds.
Silver	Silver mode is for people who have difficulty in hearing.
3D Depth Sound Mode	Select this mode to play a 3D movie or game.

▶ Advanced Mode

Finely tuned 25 presets are arranged on a square according to their relative sound characteristics.

▶ User Mode

You can control a variety of sound effects.

Using the HDTV (Optional)

You can watch and record TV programs on your computer using Windows Media Center.

Since you can pause or replay a scene while watching TV, you can view TV broadcasts without ever missing a scene.

You can only use the TV function when the **TV tuner card** (Optional) is installed.

- **What is Media Center?**

  Media Center is a home entertainment program that enables users to enjoy TV, movies, music files and photos by using the Media Center remote control (Optional).

- **What is the TV Program Guide (EPG)?**

  The EPG (Electronic Program Guide) is provided by the EPG provider and the programs in the guide may differ from actually broadcast programs depending on the EPG provider or broadcasting station.

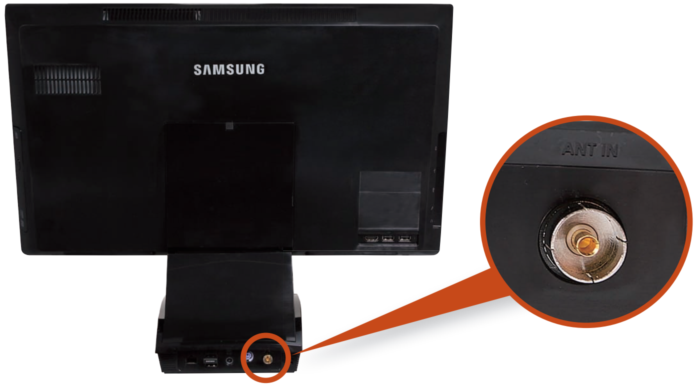
Configuring the TV

Configure it so that you can watch TV programs using the Media Center.

When installing or downloading some programs, the TV must be connected to the Internet.

Connecting the TV Antenna

To watch TV programs through the Media Center, you have to connect the **TV antenna** to the **TV tuner card** (Optional). Connect the **antenna cable** to the **TV antenna input port**.

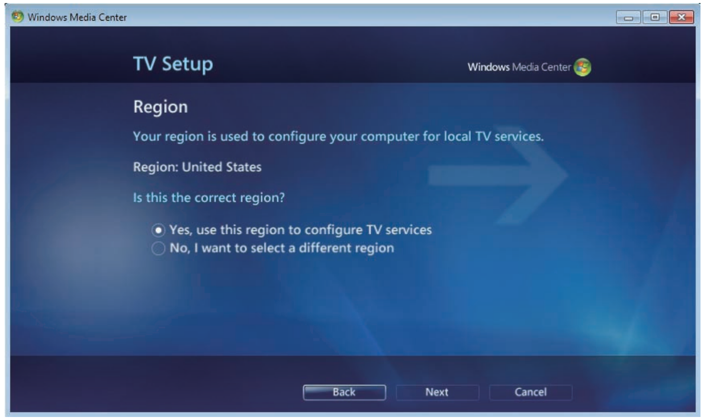


Using the HDTV (Optional)

Configuring the TV in the Media Center

1. Click **Start** > **Windows Media Center** .

2. Click **Media Center** > **Express(At the initial setting)** > **Tasks** > **Settings** > **TV** > **TV Signal Settings**.



TV Setup

Region

Your region is used to configure your computer for local TV services.

Region: United States

Is this the correct region?

● Yes, use this region to configure TV services
○ No, I want to select a different region

3. Continue the setup according to the instructions displayed on the screen.

1. The setup procedures may differ depending on the type of TV service.
2. You have to set the product to the region and post code where the computer is installed.
3. If the TV signal provider screen appears, select a provider. If the configured provider is incorrect, not all of the channels may be received or the TV picture quality may be degraded. (In this case, you can change the provider by configuring the TV signal settings again.)
4. If the guide and the PlayReady settings screen appear, agree to the agreement and start the installation. (For the installation, you must be connected to the Internet.)

Watching TV

1. Select **TV** in the Media Center.

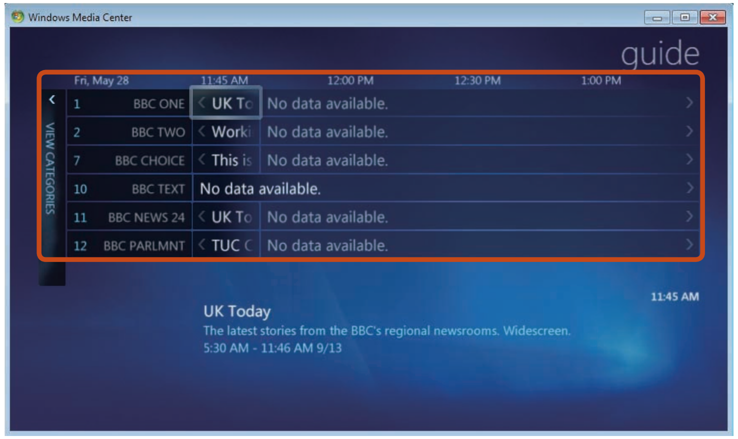
2. Select **Live TV** or **Guide** from the menu.

- **When Live TV has been selected:**

The TV broadcast is displayed immediately. Switch to a channel to watch it.

- **When Guide has been selected:**

When the Guide List is displayed, select a program that is currently being broadcast.



Fri, May 28		11:45 AM	12:00 PM	12:30 PM	1:00 PM
1	BBC ONE	UK To	No data available.		
2	BBC TWO	Worki	No data available.		
7	BBC CHOICE	This is	No data available.		
10	BBC TEXT	No data available.			
11	BBC NEWS 24	UK To	No data available.		
12	BBC PARLMNT	TUC C	No data available.		

11:45 AM

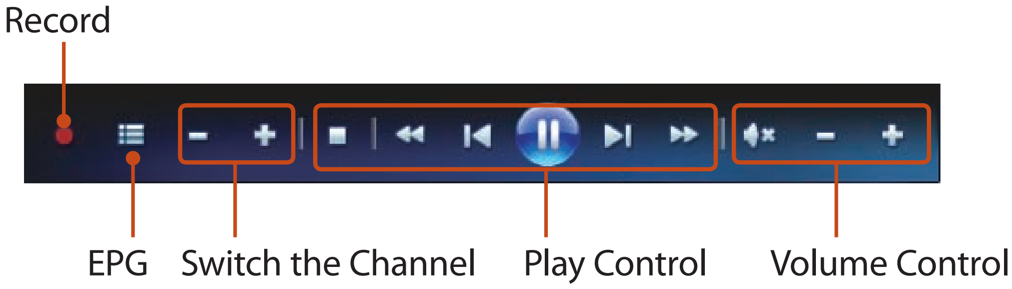
UK Today
The latest stories from the BBC's regional newsrooms. Widescreen.
5:30 AM - 11:46 AM 9/13

The selected channel is displayed.

Using the HDTV (Optional)

Play through a file, make a recording or switch channels while watching TV

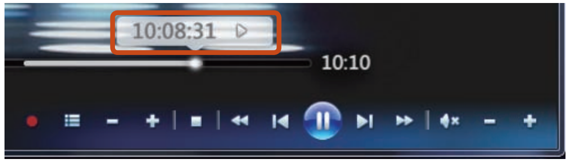
Move the mouse, and select a function when the following control bar appears.



Replaying a scene while watching TV

- While watching TV, click the **Rewind** (⏮) or the **Fast Forward** (⏪) icon.
- Click over the screen.

  If the **Time Shift** bar appears, select a time by sliding the Time Shift bar.



- You can only use the Timeshift function on one channel.

  If you switch channels, you cannot view the program broadcast on the previous channel using the Timeshift function.
- You can rewind a TV program only up to 30 minutes before.

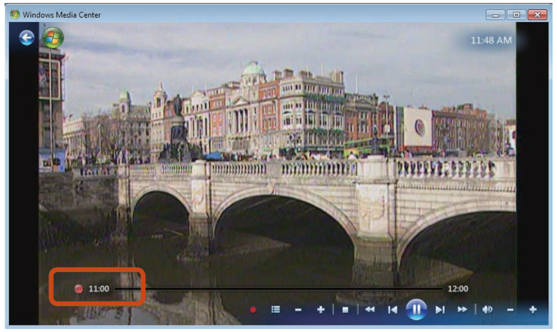
Recording TV

You can record a TV program on the Media Center running on your computer. Using the EPG Guide, you can reserve a recording and record a series.

Recording the current program

1 Move the mouse over the screen. When the control bar appears, click **Record** (●).

A red dot appears indicating that a recording is in progress and the recording begins.



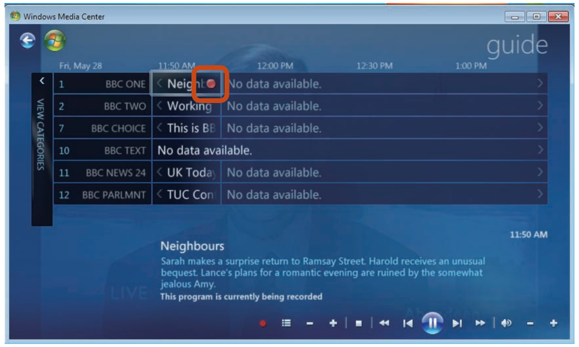
2 To stop recording or to configure the recording as a series recording, click the **Record** button again.

Making a recording or a reservation in the Guide

1 Click **Media Center > TV > Guide**.

2 Right-click over a program to be recorded and select **Record** or **Record Series**.

A **red dot** appears over the program list.



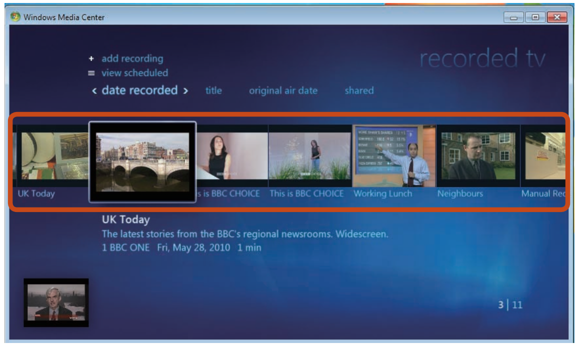
Neighbours
Sarah makes a surprise return to Ramsay Street. Harold receives an unusual bequest. Lance's plans for a romantic evening are ruined by the somewhat jealous Amy.
This program is currently being recorded

1. Even when the computer is in power-saving (standby) mode, if the recording reservation time is reached, the TV automatically wakes up from power-saving mode and performs the reserved recording.
2. While recording a channel, you cannot watch another channel.

Playing a recorded program

1 Click **Media Center > TV > Recorded TV**.

2 Select a program and click **Play** or **Resume**.



UK Today
The latest stories from the BBC's regional newsrooms. Widescreen.
1 BBC ONE Fri, May 28, 2010 1 min

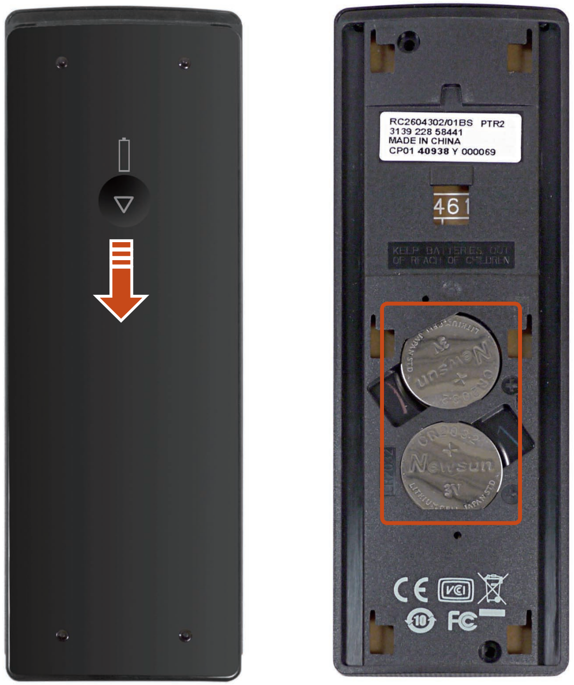
The recorded file is saved in the folder **Computer > Local Disk (C:) > User > Common > Common Recorded TV**.

Using the Remote Control (Optional)

Using the Media Center remote control, you can use the Media Center remotely.

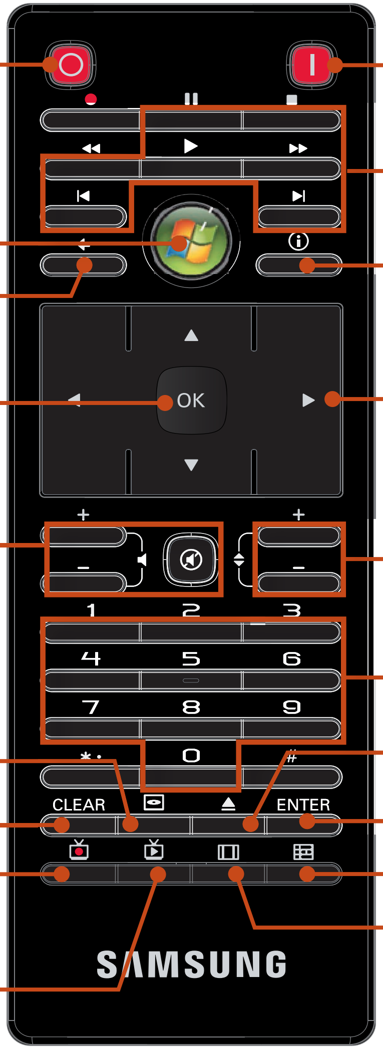
- This product is a remote control dedicated to the Media Center.
- Insert the supplied batteries into the remote control before using it.
- The appearance of the remote control may differ from the actual one.
- Press the I remote control button to turn the product on. (However, you cannot turn off the system using ○.)
- To turn the product on by pressing the I remote control button, press the **F2** key when the booting logo appears to enter the BIOS, select **Advanced > Advanced Environment Control** and set the **Remote Controller Boot** to **Enabled**.

Open the cover of the remote control at the bottom and insert the batteries according to the correct **polarity** (+,-).



Using the Remote Control (Optional)

To turn the product on by pressing the I remote control button, press the **F2** key when the booting logo appears to enter the BIOS, select **Advanced > Advanced Environment Control** and set the **Remote Controller Boot** to **Enabled**.



Start Sleep Mode

Start

Starts the Media Center or opens the start screen

Back

Returns to the previous screen

OK

Selects or executes an item

Volume/Mute

Controls the volume

Movie Library: Moves to the Movie Library

Delete: Deletes the currently selected file

Recorded TV Programs

Moves to the recorded TV Programs

Live TV: Displays live TV

Exits Sleep Mode/ Turning on the System

Play Control Buttons

Program Information

Shows the current program information

Arrow Buttons

Navigates menus or items

Channel/Page: Switching to Channel Navigation/Page Navigation Mode

Numeric Buttons: Entering English Letters, Numbers and Symbols

Eject CD: Open the CD drive tray

Enter: Returns to the previous channel or executes the current menu

EPG: Shows TV program guide

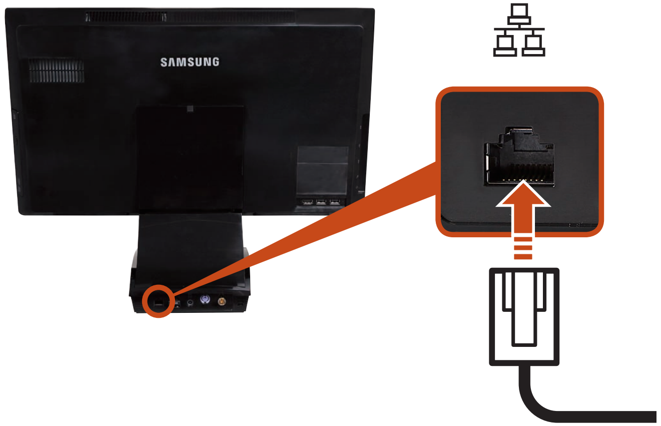
Switch Aspect Ratio

Zoom-in/zoom-out settings screen display

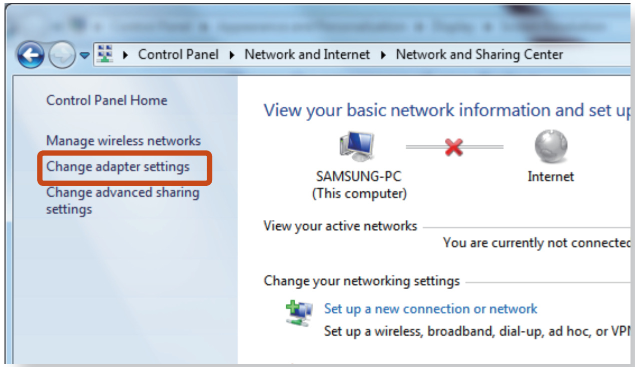
Wired Network

A wired network is a network environment used for a company network or broadband internet connection at home.

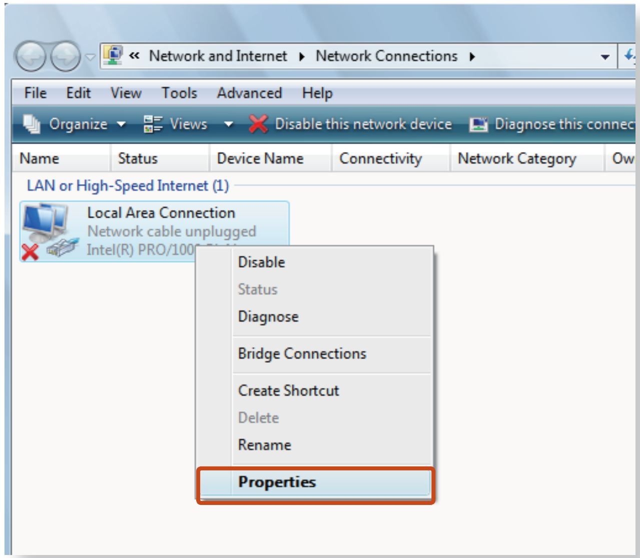
1 Connect a LAN cable to the computer’s LAN port.



2 Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** and click on **Change adapter settings** in the left menu pane.

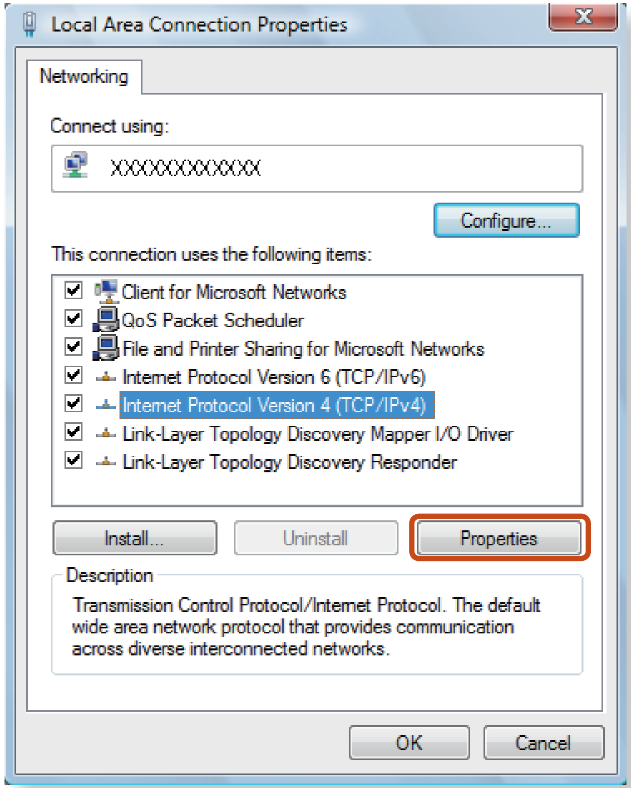

Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Control Panel Home
Manage wireless networks
Change adapter settings
Change advanced sharing settings
View your basic network information and set up
SAMSUNG-PC
(This computer)
Internet
View your active networks
You are currently not connected
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN

3 Select **Local Area Connection** and click the right button of the touch pad and select **Properties**.


« Network and Internet ▸ Network Connections ▸
File Edit View Tools Advanced Help
Organize Views Disable this network device Diagnose this connec
Name Status Device Name Connectivity Network Category Ow
LAN or High-Speed Internet (1)
Local Area Connection
Network cable unplugged
Intel(R) PRO/100
Disable
Status
Diagnose
Bridge Connections
Create Shortcut
Delete
Rename
Properties

The LAN Device name may differ depending on your computer’s Network Device.

4 Select **Internet Protocol Version 4(TCP/IPv4)** from the list of Network Components and click **Properties**.



Connect using:
XXXXXXXXXXXX

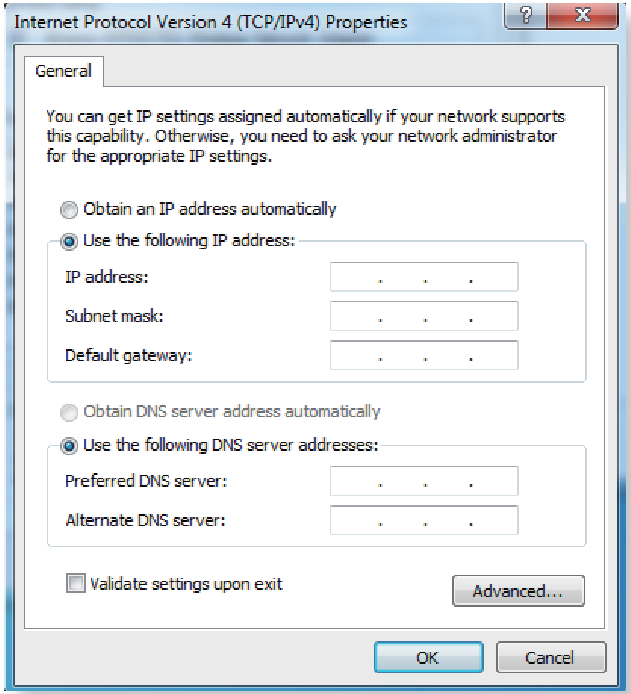
This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

- The Network Component name may differ depending on the Operating System Installed.
- To add a network component, click Install in the screen shown in the figure above. You can add clients, services, and protocols.

5 Configure the IP settings.

When using DHCP, select **Obtain an IP address automatically**. To use a static IP address, select **Use the following IP address**, and set the IP address manually.



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:
IP address: . . .
Subnet mask: . . .
Default gateway: . . .

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: . . .
Alternate DNS server: . . .

☐ Validate settings upon exit

When not using DHCP, ask your network administrator for the IP address.

6 When you have completed the settings, click the **OK** button.

The network settings have been completed.

Wired Network

Using the WOL (Wake On LAN) function

<Wake On LAN> is a function that activates the system from Sleep mode when a signal (such as a ping or magic packet command) arrives over the network (wired LAN).

1 Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click on **Change adapter settings** in the left menu pane.

2 Right-click on the **Local Area Connection** and select **Properties**.

3 Click **Configure > Power Management** tab. **Select Allow this device to bring the computer out of standby**, then click **OK**. Restart the system.

- If the system wakes up from Sleep mode even though there is no received signal, use the system after disabling the <Wake On LAN> function.
- The LAN LED may not be turned off if System is shoutdown without disabling the WOL (Wake on LAN) option.
- Connecting a wired LAN while using a wireless LAN may not activate the <Wake On LAN> function. Set the Wireless LAN to **Disable** to use the <Wake On LAN> function.
- <Wake On LAN> feature may not work while using Hybrid power saving feature.
  Hybrid sleep mode can be disabled from **Power Options** under Control Panel.

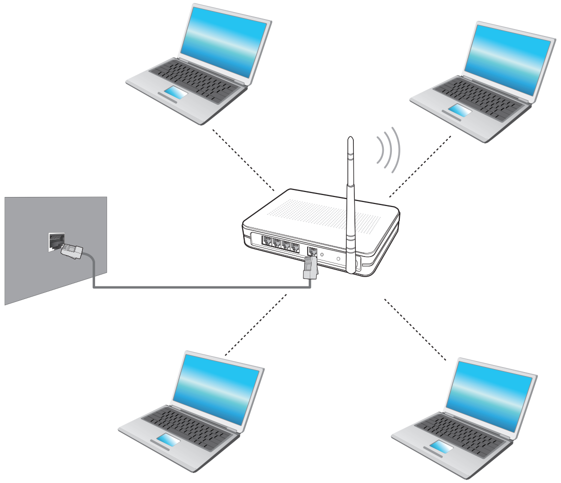
For Win7, Wake On LAN is not supported by Ping.

Other features for reference

When connected to a 100Mbps/1Gbps wired LAN and the computer exits Sleep/hibernation mode, a message appears informing you of a connection to a 10Mbps/100Mbps wired LAN. This happens because when the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates at 100Mbps/1Gbps.

Wireless Network

A wireless network (Wireless LAN) environment is a network environment that enables communicating between multiple computers at home or a small-size office through wireless LAN devices.



The descriptions below are for computer models with a Wireless LAN card or device. A Wireless LAN device is optional.
The pictures in this manual may differ from the actual product depending on your wireless LAN device model.

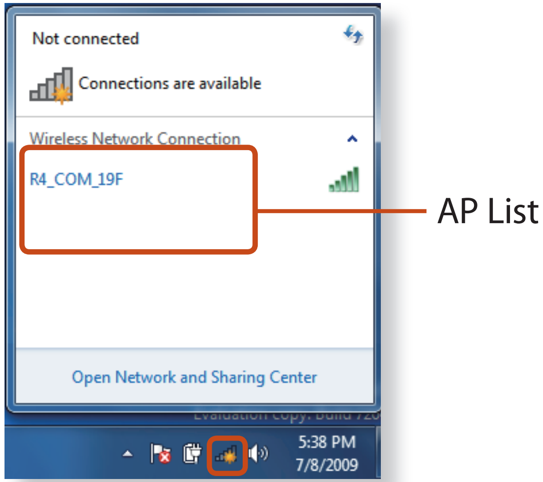
What is an Access Point (AP)?

An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. Connect the computer with the wireless LAN function to the AP to use to the network connection.

Connecting to a Wireless LAN

If there is an AP, you can connect to the Internet via the AP using the Wireless LAN connection method provided by Windows.

1 If you click the **Network Connections** icon in the system tray, a list of available APs appears. If you select an AP to connect to, the **Connect** button appears.



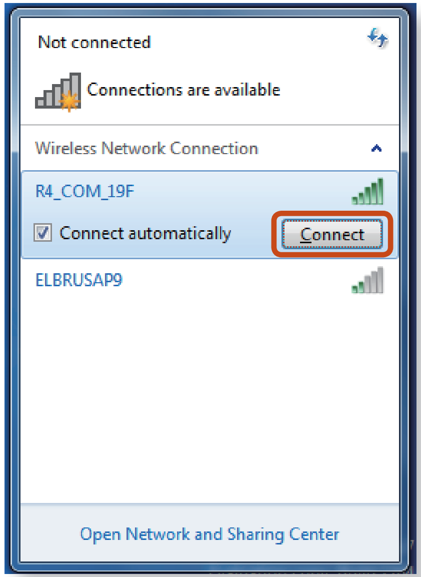
Not connected
Connections are available
Wireless Network Connection
R4_COM_19F
Open Network and Sharing Center
5:38 PM
7/8/2009
AP List

Wireless Network

2 Click **Connect**.

If a network key is set for the AP, enter the network key and then click **Connect**.

For the network key, please ask your network administrator.

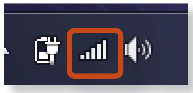

Not connected
Connections are available
Wireless Network Connection
R4_COM_19F
☑ Connect automatically
Connect
ELBRUSAP9
Open Network and Sharing Center

3 When **Connected** to the AP is displayed, click the **Close** button.

You can access the network.

Normal Wireless Network Status

If the wireless LAN icon is displayed in the system tray of the Taskbar, it indicates that the computer is connected to the Internet properly (see below).

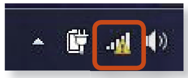


Abnormal Wireless Network Status

When you are not connected to the Internet

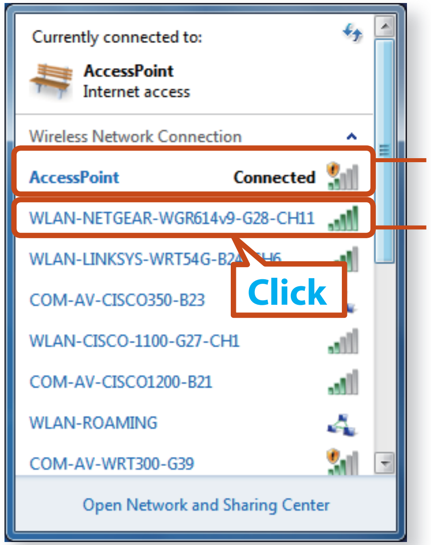
This is indicated by the wireless LAN icon ⚠ in the system tray of the Taskbar. In this case, you have to check the IP address settings.

Please contact your network administrator and reconfigure the IP address.



When APs are found but your computer is not connected to the Internet

This is the case when an AP with a weak signal has been set to a high priority. Connect to an AP with a strong signal by clicking it.



The currently connected AP.
The signal strength is low.

An AP with a strong signal strength

Chapter 3.
Settings and Upgrade

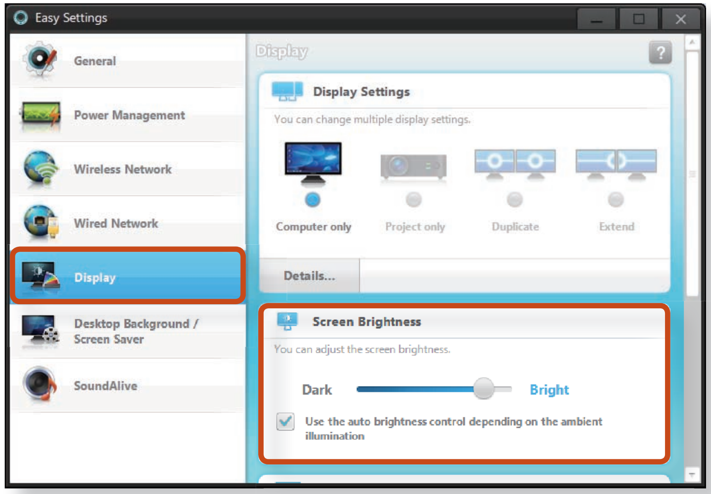
LCD Brightness Control

You can control the LCD brightness.

Using the Easy Settings (for corresponding models only)

1 Click **Start** > **All Programs** > **Samsung** > **Easy Settings.**

2 Select **Display** > **Screen Brightness** and adjust the brightness.



You can change multiple display settings.

You can adjust the screen brightness.

☑ Use the auto brightness control depending on the ambient illumination

Adjusting the Volume using the touch button (for corresponding models only)

Press the MENU **touch button** and select the **Picture** menu to configure the settings.

Samsung Computer's Defective LCD pixel management standard

Although Samsung Electronics, Co., Ltd. observes strict quality and confidence specifications for LCD manufacturing, the company must inevitably allow a few defective cells in panels due to a technological limitation of the manufacturing process.

Therefore Samsung observes and manages the following dot principles:

- Bright dot : 2 or less
- Black dot : 4 or less
- Combination of Bright and Dark : 4 or less

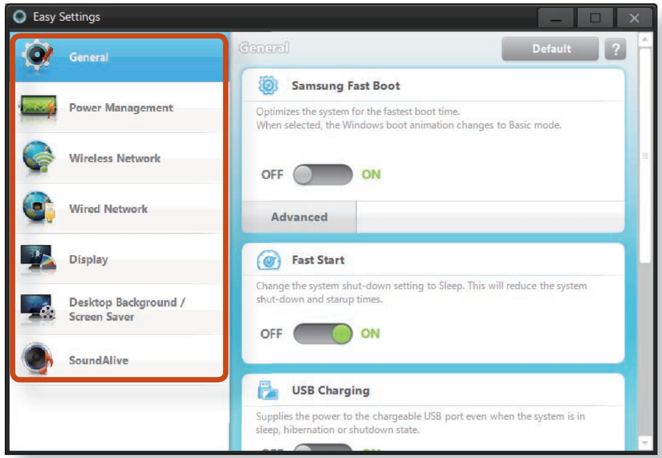
Easy Settings (Optional)

Easy Settings is the integrated Samsung software control program that allows you to configure various settings.

- This description is for models that support the function and are running on Windows 7.
- The screen figures and terms may differ depending on the model.
- Depending on the program version, some functions may not be provided or different functions may be provided.

1 Click **Start > All Programs > Samsung> Easy Settings**.

2 Select an item to configure the corresponding function.



Optimizes the system for the fastest boot time.
When selected, the Windows boot animation changes to Basic mode.

Change the system shut-down setting to Sleep. This will reduce the system shut-down and starup times.

Supplies the power to the chargeable USB port even when the system is in sleep, hibernation or shutdown state.

Functions

General	Configures the Samsung Fast Boot, Fast Start, Chargeable USB and User Account Control settings. Set the Samsung Fast Boot option to On to optimize the computer so that the computer boots up the fastest.
Power Management	You can configure the Power Plan (High Performance, Power Saver, Balanced), the power-saving settings and the display settings.
Wireless Network	You can configure whether to use the Wi-Fi and Mobile AP options.
Wired Network	You can select automatic or fixed IP settings.
Display	You can configure Display Settings, and the screen brightness/color.
Desktop Background / Screen Saver	You can configure the Desktop background and Display Color.
SoundAlive	You can configure the sound mode (Music, Classic, Concert Hall, Movie, 3D Depth Sound Mode, Advanced, etc.).

BIOS Setup

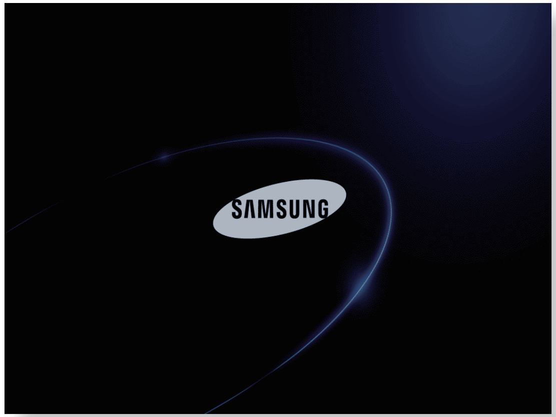
The BIOS Setup enables you to configure your computer hardware according to your needs.

- Use the BIOS setup to define a boot password, change the booting priority, or add a new device.
- Since incorrect settings may cause your system to malfunction or crash, take care when configuring the BIOS.
- The functions of the BIOS setup are subject to change for product function enhancement purposes.
- The BIOS Setup menus and items may differ depending on your computer model.

Entering the BIOS Setup

1 Turn the computer on.

2 When the booting screen (SAMSUNG logo) appears, press the **F2** key to enter the BIOS Setup.

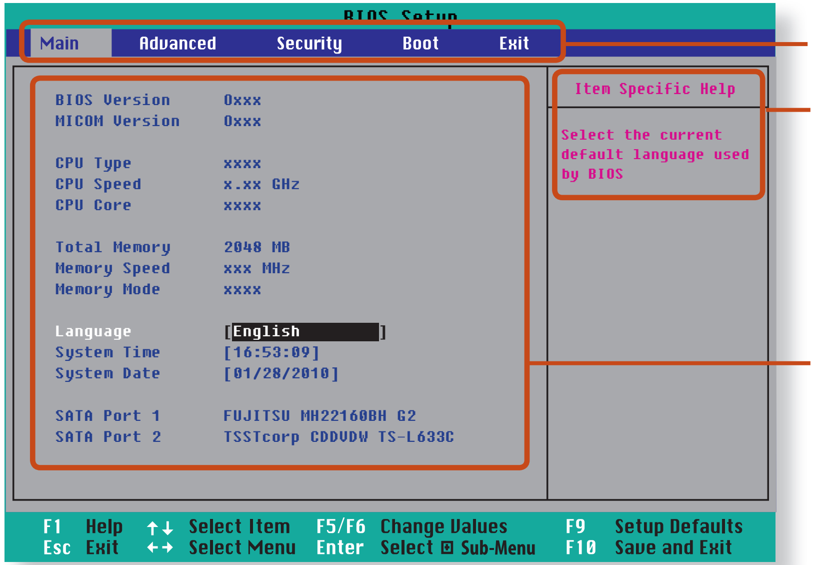


3 After a moment, the BIOS setup screen appears.

The items in the BIOS setup may differ depending on the product.

The BIOS Setup Screen

The BIOS Setup menus and items may differ depending on your computer model.



```
                         BIOS Setup
 Main     Advanced     Security     Boot     Exit

   BIOS Version      0xxx                 Item Specific Help
   MICOM Version     0xxx
                                        Select the current
   CPU Type          xxxx               default language used
   CPU Speed         x.xx GHz           by BIOS
   CPU Core          xxxx

   Total Memory      2048 MB
   Memory Speed      xxx MHz
   Memory Mode       xxxx

   Language          [English      ]
   System Time       [16:53:09]
   System Date       [01/28/2010]

   SATA Port 1       FUJITSU MH2216OBH G2
   SATA Port 2       TSSTcorp CDDVDW TS-L633C

 F1   Help   ↑↓  Select Item   F5/F6  Change Values        F9   Setup Defaults
 Esc  Exit   ←→  Select Menu   Enter  Select ⊞ Sub-Menu    F10  Save and Exit
```

Setup Menu

Help

Help for the selected item appears automatically.

Setup Items

Setup Menu	Description
Main	This is a description about the basic specifications of the computer.
Advanced	Using this menu, you can configure the major chipsets and additional functions.
Security	Used to configure security functions, including passwords.
Boot	This menu enables you to configure peripherals and booting related settings such as the boot priority.
Exit	Used to exit the Setup either saving the changes or not.

BIOS Setup

System Setup Keys

In the Setup, you have to use the keyboard.

F1	F1	Press to view the Setup Help.
Up & Down Keys	↑ ↓	Press to move up and down.
F5/F6	F5 F6	Press to change the item value.
F9	F9	Press to load the default Setup settings.
ESC	Esc	Press to return to a higher level menu or to move to the **Exit** menu.
Left & Right Keys	← →	Press to move to another menu.
Enter	⇧ Shift	Press to select an item or to enter a sub menu.
F10	F10	Press to save the changes and exit Setup.

The keyboard image may differ from the actual keyboard.

Setting a Boot Password

If you set a password, you have to enter the password when you turn the computer on or enter the BIOS Setup.

By configuring a password, you can restrict system access to authorized users only and protect data and files saved on the computer.

- The password setting provides the following 3 sub menus. (Supervisor Password, User Password and HDD Password)
- Do not lose or forget your password.
- Do not let others know your password.
- If you forget the Supervisor Password or HDD Password, you will need to request assistance from the service center. In this case, a service fee will be charged.
- When you forget the User Password, you can disable the Supervisor Password, and the User Password is also automatically disabled.
- The screen images and terms may differ from actual product depending on the computer model and driver version.

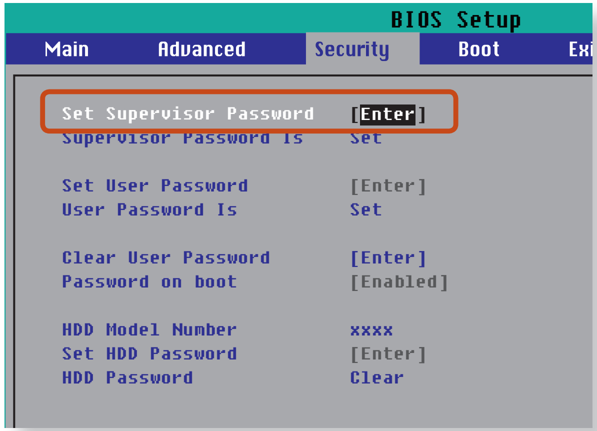
Setting a Supervisor Password

If you set a Supervisor Password, you need to enter the password when you turn the computer on or enter the BIOS Setup.

Setting only the Supervisor Password and User Password is not very secure. You can use an HDD Password as well to increase the security level.

1 Select the **Security** menu in the BIOS Setup.

2 In the **Set Supervisor Password** item, press <**Enter**>.



```
Set Supervisor Password      [Enter]
Supervisor Password Is       Set

Set User Password            [Enter]
User Password Is             Set

Clear User Password          [Enter]
Password on boot             [Enabled]

HDD Model Number             xxxx
Set HDD Password             [Enter]
HDD Password                 Clear
```

3 Enter a password, press <**Enter**>, re-enter the password for confirmation, and press <**Enter**> again.

The password can be up to 8 characters long. You can use English letters, numbers and special characters.

4 The supervisor password has been set.

The supervisor password is required to turn the computer on or to enter the BIOS Setup.

For some models, if the password entered message appears in the **Setup Notice** window, the settings are not complete until the <**Enter**> key is pressed.

Setting a Boot Password

Setting a User Password

Using the **User Password**, you can turn the computer on but you cannot change the major settings of the BIOS Setup because you cannot enter the BIOS Setup.

Before configuring a user password, a **supervisor password** must have been configured. Deactivating the supervisor password also deactivates the user password.

In the **Set User Password** item, press <**Enter**> and complete the procedures from Step 3 of Setting a Supervisor Password.

Setting Up a Boot Password

To setup a boot password, the administrator password (**Set Supervisor Password**) should be set in advance.

Set the **Password on boot** item to **Enabled**.

Once a boot password is set, you have to enter a password to boot up the computer.

Be sure to remember the password for later use.

Setting up a Hard Disk Drive Password (Optional)

If you set a password for a hard disk drive, it cannot be accessed from another computer.

Press <**Enter**> in the **Set HDD Password** item and define a password as described in Step 3 of the Setting up the Supervisor Password.

- The hard disk drive password setting function is not provided for some models.
- **Changing the hard disk drive password**

  For security purposes, you can only change a hard disk drive password after restarting the computer by pressing the computer **Power** button.

  If you cannot change the hard disk drive password or the **HDD Password Frozen** message appears when entering the BIOS Setup and then selecting **Security > HDD Password**, press the **Power** button to turn the computer on again.

Setting a Boot Password

Deactivating the Password

1 Press <**Enter**> on the password to be deactivated. For example, to deactivate a supervisor password in the **Set Supervisor Password** item, press <**Enter**>.

2 In the **Enter Current Password** item, enter the currently configured password and press <**Enter**>.

3 Leave the **Enter New Password** item field empty, and press <**Enter**>.

4 Leave the **Confirm New Password** field empty, and press <**Enter**>.

The password is deactivated.

For some models the password is only canceled if the <**Enter**> key is pressed in the **Setup Notice** window.

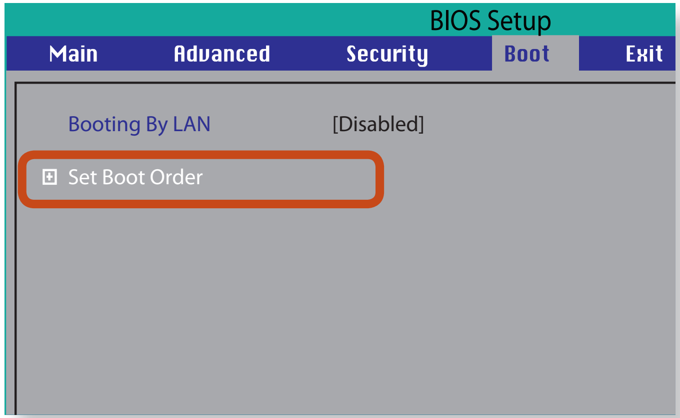
Changing the Boot Priority

By default, the highest boot priority device is set to the CD-ROM/DVD drive. As an example, the procedures to change the highest boot priority device to the hard disk drive are described below.

The screen images in this document may differ from actual product.

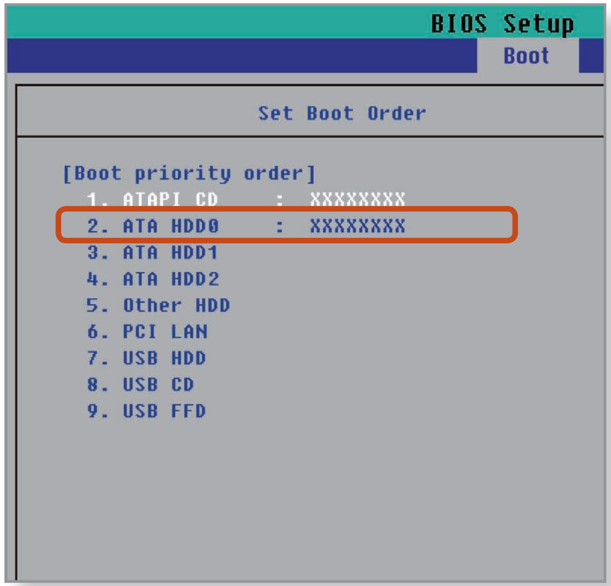
1 Select the **Boot** menu in the BIOS Setup.

2 Press <**Enter**> on the **Boot Device Priority** item.



Booting By LAN [Disabled]

3 Press the down key (↓) to move to the **ATA HDD** item and press the **F6** key to move up to the top item.



```
[Boot priority order]
  1. ATAPI CD     :  XXXXXXXX
  2. ATA HDD0     :  XXXXXXXX
  3. ATA HDD1
  4. ATA HDD2
  5. Other HDD
  6. PCI LAN
  7. USB HDD
  8. USB CD
  9. USB FFD
```

4 Press the **F10** key to save the settings and exit Setup.

The highest boot priority device is now set to the Hard Drive.

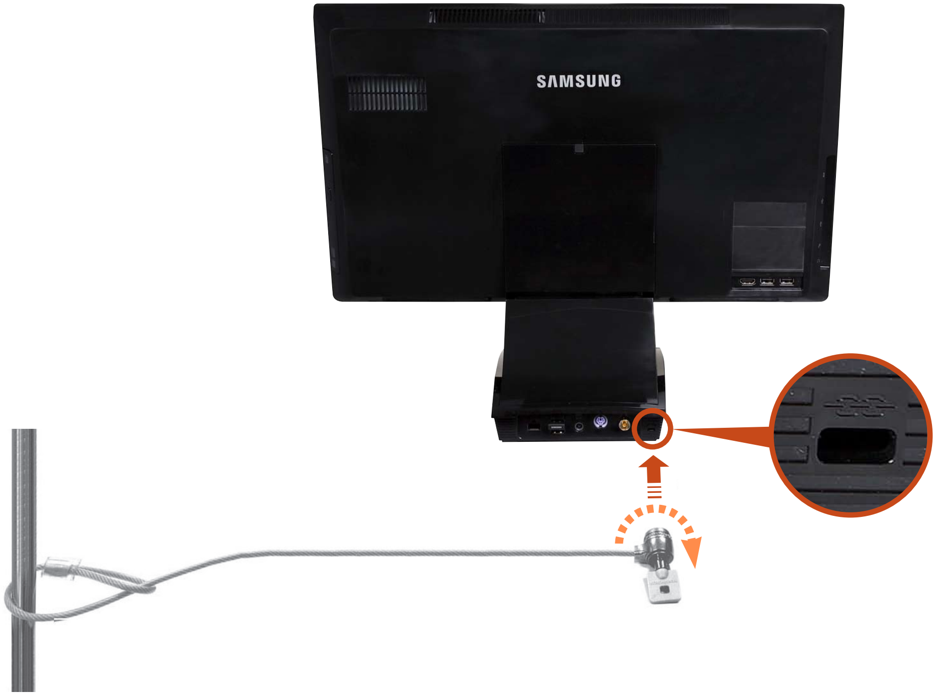
Using the Security Slot

You can secure the computer by connecting a lock and cable to the Security Slot.

To use this feature, you have to purchase the lock and cable additionally.

To use the lock and cable, refer to the product manual.

Tie the lock and cable to a fixed object and install the other end of the cable to the security slot.



Chapter 4.
Backup/Restore

Samsung Recovery Solution (Optional)

Samsung Recovery Solution is a program that enables restoring or backing up the hard disk drive for when a problem occurs with the computer.

If the computer fails to boot up, you can restore the computer by pressing the **F4** key in the booting screen.

- Samsung Recovery Solution may not be provided or the version may differ depending on the model. In addition, some functions may not be provided or may differ depending on the version.

  For more information on using Samsung Recovery Solution, please refer to the online help of the program.
- The screen images in this document may differ from actual product.
- If your computer does not have an internal ODD, you need an external ODD connected to your computer to use the Backup Function or Restore Function using DVDs.
- The System Software function may not be provided depending on the program version.

Samsung Recovery Solution Functions

Backup/Restore Functions

Backup Function
Backs up drive C or required folders and files.

- **Complete Backup**

  Backs up drive C.
- **Data Backup**

  Backs up important folders and files.

A problem occurs

→

Restore Function
Restores major Windows files, drive C, or folders and files to the previous state.

- **Basic Restore**

  Restores only major Windows files in a short time.
- **Complete Restore**

  Restores drive C to the previous, normal state.
- **Data Restore**

  Restores important files or folders to the previously backed up state.

Samsung Recovery Solution (Optional)

System Software Functions

Samsung Recovery Solution provides system software so that you can reinstall or copy the device drivers and system software necessary for normal operations onto a separate storage device.

Restore Function

Not only can you use Samsung Recovery Solution when Windows is running, but also when you are unable to boot up into Windows. Let's learn how to use Samsung Recovery Solution.

Optional functions such as Initial State Image, Initial Status Backup, and Partitioning are only available in some models.

If the image of the initial state is saved on a DVD or removable storage device, connect the DVD drive or removable storage device to the computer before using the function.

Partition Setup & Initial Status Backup

If you turn your computer on for the first time, the Initial Status Backup function is performed after registering Windows. This function saves an image of the Initial Status of the C drive to a secure location so that users can restore the computer to the Initial Status using the Complete Restore function. An Initial Status Backup is only performed once immediately after the computer is purchased.

1 If you turn the power on for the first time, the Register Windows screen appears. If you register Windows according to the instructions on the screen, the computer will be restarted.

2 After the computer has been restarted, the **Partition Setup** screen appears.

To resize the C and D drives, adjust the partition size using the slide bar and the click **Next**.

> The Partition Setup function is only available when the computer is turned on for the first time and will not be available afterwards. Once you have completed the partitioning, it cannot be resized. Partition the disk carefully.

3 The **Initial Status Backup** screen appears.

To continue the Initial Status Backup, click **Restart Now**. The computer will restart.

4 The Initial Status Backup is performed to backup the initial status of the C drive to a secure location. This backup image is used for the Complete Restore function that restores your computer to the initial status.

5 When the Initial Status Backup is complete, restart Windows.

Samsung Recovery Solution (Optional)

Restoring the computer

Restore is a function that enables restoring the computer to a saved point when the computer was purchased or a user-saved point.

The Restore function provides the Basic Restore and Complete Restore options.

1 **– When Windows is running:**

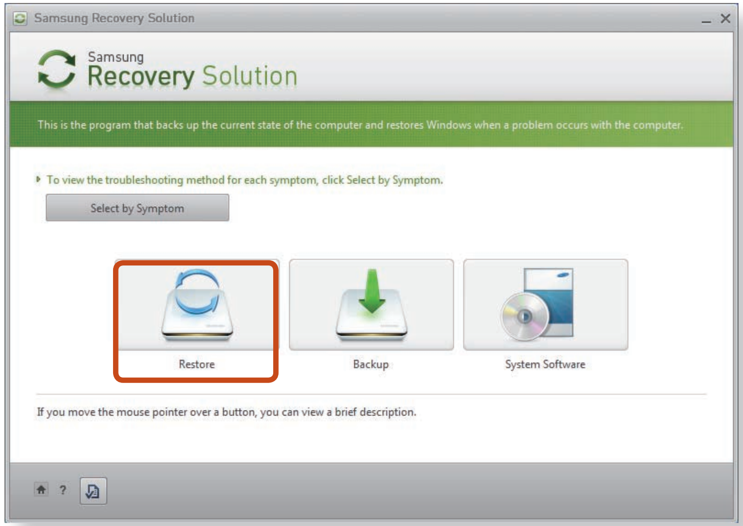
Click **Samsung Recovery Solution**.

– When Windows does not start:

Turn the computer on and press the **F4** key when the boot screen (SAMSUNG logo) appears. After a moment, the computer boots up in Restoration mode and the Samsung Recovery Solution screen appears.

> For computers supporting the touch screen function, the touch screen function does not work during Restore Mode. In this case, please use the mouse.

2 If the initial menu screen appears, click **Restore**.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

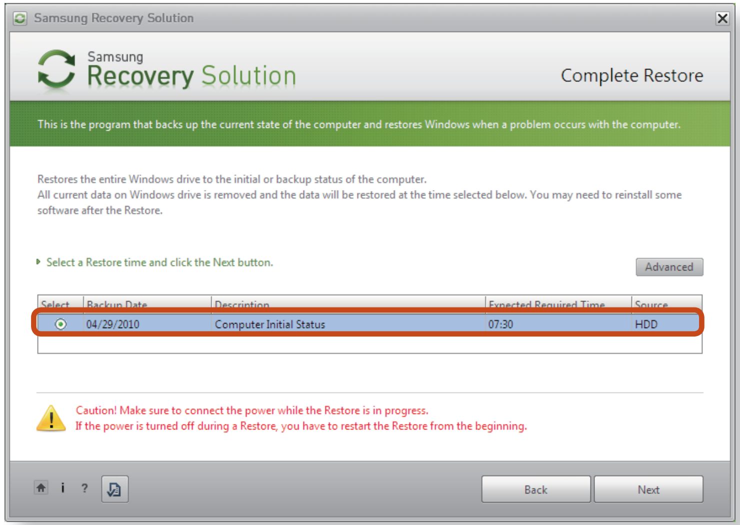
To view the troubleshooting method for each symptom, click Select by Symptom.

If you move the mouse pointer over a button, you can view a brief description.

> If you click **Select by Symptom**, the Select by Symptom menu appears. If you select a symptom, a recommended restoration option will blink. Click the restoration option to continue.

3 Select either **Basic Restore** or **Complete Restore** from the Restore menu.

To restore the computer to the initial state, click **Computer Initial State** and perform the restoration process according to the instructions that appear on the screen.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

Restores the entire Windows drive to the initial or backup status of the computer.
All current data on Windows drive is removed and the data will be restored at the time selected below. You may need to reinstall some software after the Restore.

Select a Restore time and click the Next button.

Select	Backup Date	Description	Expected Required Time	Source
●	04/29/2010	Computer Initial Status	07:30	HDD

Caution! Make sure to connect the power while the Restore is in progress.
If the power is turned off during a Restore, you have to restart the Restore from the beginning.

Run **Complete Restore** if the computer does not work even after **Basic Restore** has been completed.

In the **Advanced** menu, you can change the size of the hard drive partitions (e.g. C: and D:).

- Make sure to backup your data in advance, as all data will be deleted after the partition size is changed.
- The **Advanced** menu is only activated when the computer boots up in the restoration area.
  (by pressing the **F4** key during the booting sequence.)

Since a Complete Restore deletes all user data as well as additionally installed programs, please backup your important data first using the Data Backup function, before running Complete Restore.

4 The computer boots up into restoration mode and the restoration progress message appears. If you click **OK**, the restoration begins. The restoration may take some time, please wait for a moment.

5 When the ‘Restart the System’ message appears after the restoration is complete, click **OK** to restart the system.

Make sure that the power cord is connected while the restoration is in process. The first time the computer boots up after a Complete Restore has been performed, the speed of the boot process may be slowed down due to the system optimization process. At this time, do not shut the computer down by force.

Complete Backup/Restore

A **Complete Backup** saves the complete image of the C drive onto another drive or DVD. A **Complete Restore** restores the image file saved by the Complete Backup onto the C drive.

Complete Backup

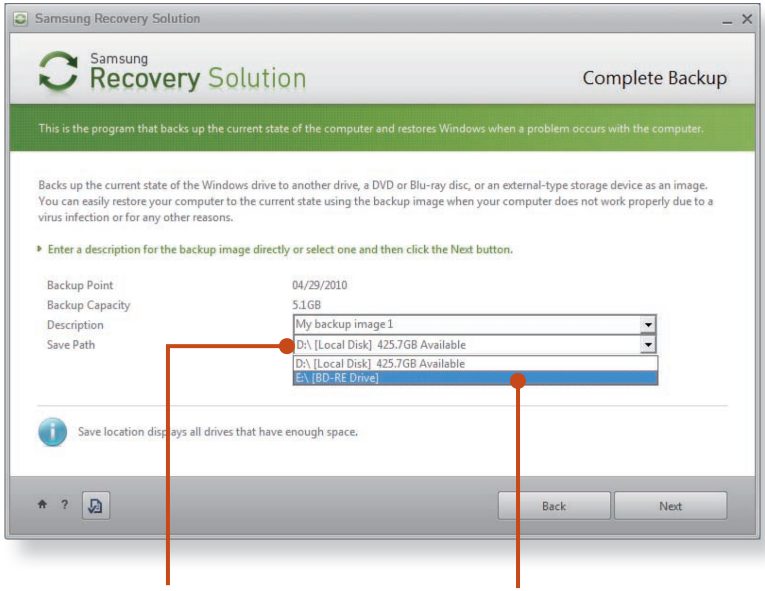
If you perform the Complete Backup function onto a DVD or removable storage device, you can restore your computer even when a problem occurs with the hard disk or when the restoration area is removed.

To create a backup, a removable storage device with at least 15 GB of free space is required.

1 Click **Backup** in the start screen of the Samsung Recovery Solution.

2 Enter a description of the current status of the computer and click **Next**.

After connecting a DVD drive or removable storage device, you can specify the DVD drive or removable storage device as the Save Path.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

Backs up the current state of the Windows drive to another drive, a DVD or Blu-ray disc, or an external-type storage device as an image. You can easily restore your computer to the current state using the backup image when your computer does not work properly due to a virus infection or for any other reasons.

Enter a description for the backup image directly or select one and then click the Next button.

Backup Point 04/29/2010
Backup Capacity 5.1GB
Description My backup image 1
Save Path D:\ [Local Disk] 425.7GB Available
D:\ [Local Disk] 425.7GB Available
E:\ [BD-RE Drive]

Save location displays all drives that have enough space.

Select Drive D.

Select the DVD drive.

3 When the option selection item appears, select an option and click **Next**.

The LiveImaging and System Software Backup functions are supported as options for the Complete Backup operation.

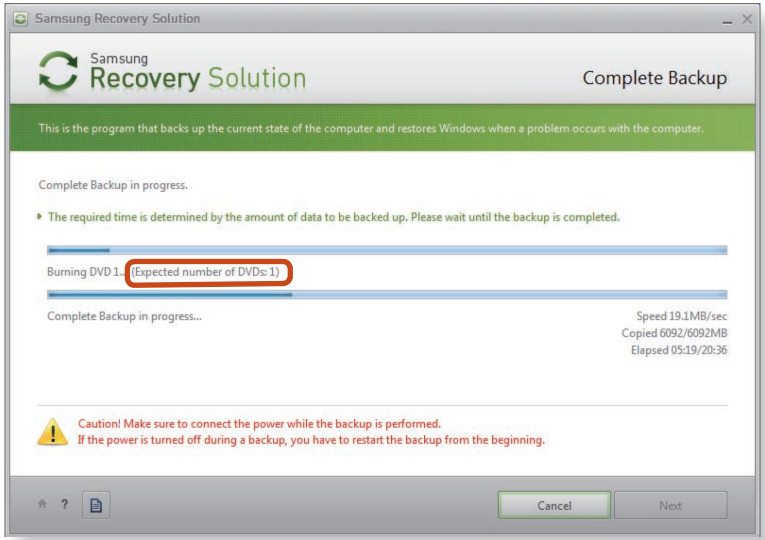
- **LiveImaging:** Performs the Complete Backup operation while Windows is running. The backup operation using LiveImaging may slow down if the hard disk drive is accessed frequently by other applications.

Samsung Recovery Solution (Optional)

4 When the system restarts in Restoration Mode, the **Complete Backup** operation begins. Continue with the backup by following the instructions.

- Samsung Recovery Solution supports the DVD+R, DVD-R, DVD+RW and DVD-RW formats.
- If the LiveImaging option has been selected, the Complete Backup operation begins without the computer being restarted.

5 Continue with the Complete Backup operation by following the instructions.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

Complete Backup in progress.

The required time is determined by the amount of data to be backed up. Please wait until the backup is completed.

Burning DVD 1.. (Expected number of DVDs: 1)

Complete Backup in progress...

Speed 19.1MB/sec
Copied 6092/6092MB
Elapsed 05:19/20:36

Caution! Make sure to connect the power while the backup is performed.
If the power is turned off during a backup, you have to restart the backup from the beginning.

6 When the ‘Restart the System’ message appears after the backup is complete, click **OK** to restart the system.

If the LiveImaging option has been selected, the computer is not restarted.

Complete Restore

1 **– When backing up onto DVD**

Turn the computer on and insert the backup DVD into the DVD drive.
If there are multiple backup DVDs, insert the first DVD.

– When backing up to a removable storage device

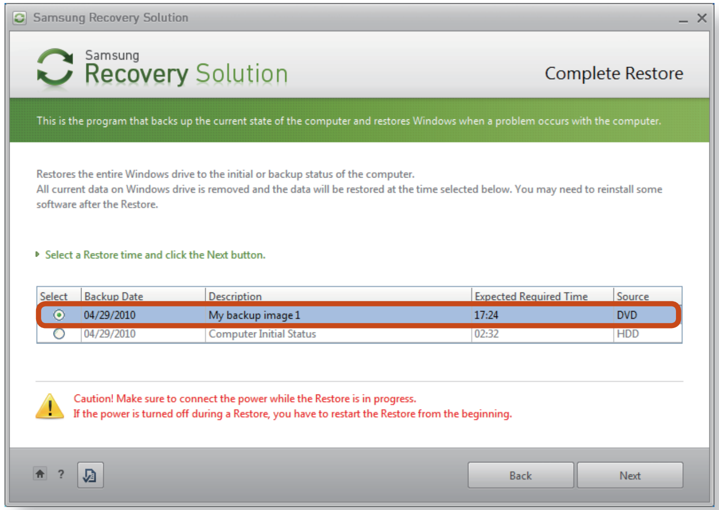
Connect the removable storage device.

– When backing up to another drive

Proceed to Step 2.

2 When the Samsung Recovery Solution start screen appears, click **Restore** and then click **Complete Restore**.

3 Select a **Complete Backup** restoration point in the restoration point selection screen and click the **Next** button. The system is restarted.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

Restores the entire Windows drive to the initial or backup status of the computer.
All current data on Windows drive is removed and the data will be restored at the time selected below. You may need to reinstall some software after the Restore.

Select a Restore time and click the Next button.

Select	Backup Date	Description	Expected Required Time	Source
●	04/29/2010	My backup image 1	17:24	DVD
○	04/29/2010	Computer Initial Status	02:32	HDD

Caution! Make sure to connect the power while the Restore is in progress.
If the power is turned off during a Restore, you have to restart the Restore from the beginning.

4 The restoration progress message appears after the computer boots up in restoration mode. If you click **OK**, the restoration begins.

If multiple DVDs have been used for a Complete Backup, whenever burning a DVD is completed, the "Insert the next DVD" message will appear.

5 When the 'Restart the System' message appears after the restoration is complete, click **OK** to restart the system. The Complete Restore has been completed.

Samsung Recovery Solution (Optional)

Data Backup/Restore

The **Data Backup** function enables you to backup specific files and folders to another drive, DVD or removable storage device. **Data Restore** enables you to restore data using the data saved by a Data Backup when data is lost. This guide describes the Backup and Restore procedures on the basis of backing up and restoring by using DVD.

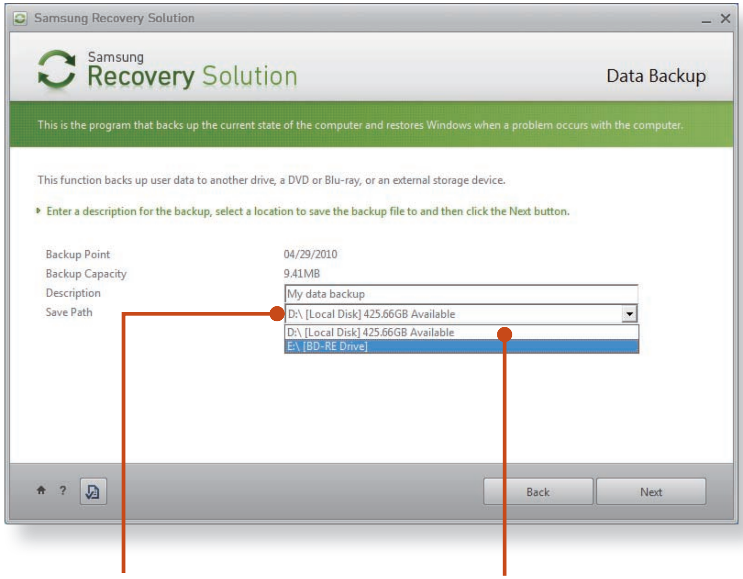
Data Backup

1 When the Samsung Recovery Solution start screen appears, click **Backup** and then click **Data Backup**.

2 In the data selection screen, select either **Basic Selection** or **Select from all**, select a folder or file to be backed up, and then click the **Next** button.

3 Enter a description for the backup in the **Description** field so that you can easily recognize it later and specify the **Save Path**.

If your computer has a DVD-Writer, you can specify the DVD drive as the Save Path.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

This function backs up user data to another drive, a DVD or Blu-ray, or an external storage device.

Enter a description for the backup, select a location to save the backup file to and then click the Next button.

Backup Point 04/29/2010
Backup Capacity 9.41MB
Description My data backup
Save Path D:\ [Local Disk] 425.66GB Available
D:\ [Local Disk] 425.66GB Available
E:\ [BD-RE Drive]

Select Drive D.

Select the DVD drive.

If you have specified a hard disk drive or a removable disk as the Save Path, the **SamsungRecovery\SamsungData** folder is created on the corresponding drive (e.g. D:\) and the data is saved to the folder. Take care to not delete the folder by mistake or on purpose.

4 If you click the Next button, the Data Backup begins. If you have selected the DVD drive as the Save Path, the “Insert a blank DVD” message appears. Insert a blank DVD and click the OK button.

5 The “Backup is completed” message appears.

Data Restore

1 **– When backing up onto DVD**

Turn the computer on and insert the backup DVD into the DVD drive.

– When backing up to a removable storage device

Connect the removable storage device.

– When backing up to another drive

Proceed to Step 2.

2 When the initial menu screen appears, click **Restore** and then click **Data Restore**.

3 Select a backup item to be restored in the backup list and click the **Next** button.

4 Select a folder for the restoration and click the **Next** button. Data Restore begins.

5 When Data Restore is completed, check if the data has been restored to the specified folder.

Samsung Recovery Solution (Optional)

System Software Function

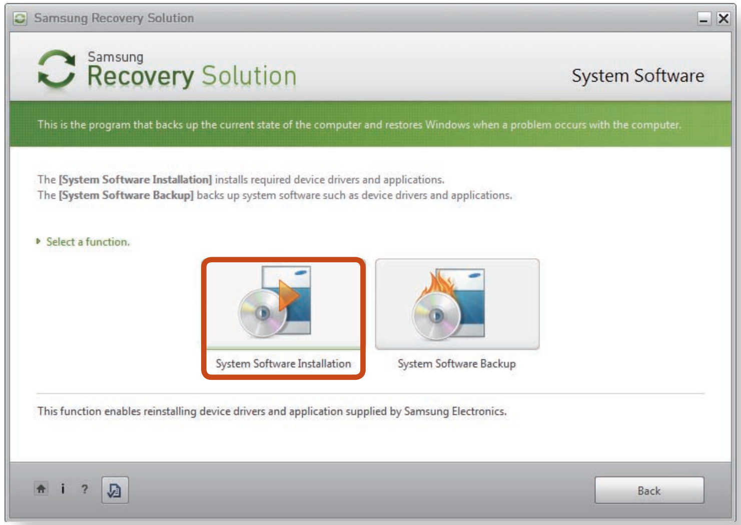
The System Software function is a function that enables you to reinstall device drivers and System Software Programs or back up those programs.

The system software function is supported by **Samsung Recovery Solution version 4** or **later**. Therefore, the function may not be supported depending on the version.

The System Software Installation Function only works in Microsoft Windows.

Installing System Software

1 When the initial menu screen appears, click **System Software > System Software Installation**.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

The **[System Software Installation]** installs required device drivers and applications.
The **[System Software Backup]** backs up system software such as device drivers and applications.

This function enables reinstalling device drivers and application supplied by Samsung Electronics.

2 Move to the **Easy Software Manager**.
Using the **Easy Software Manager**, you can install device drivers and applications.

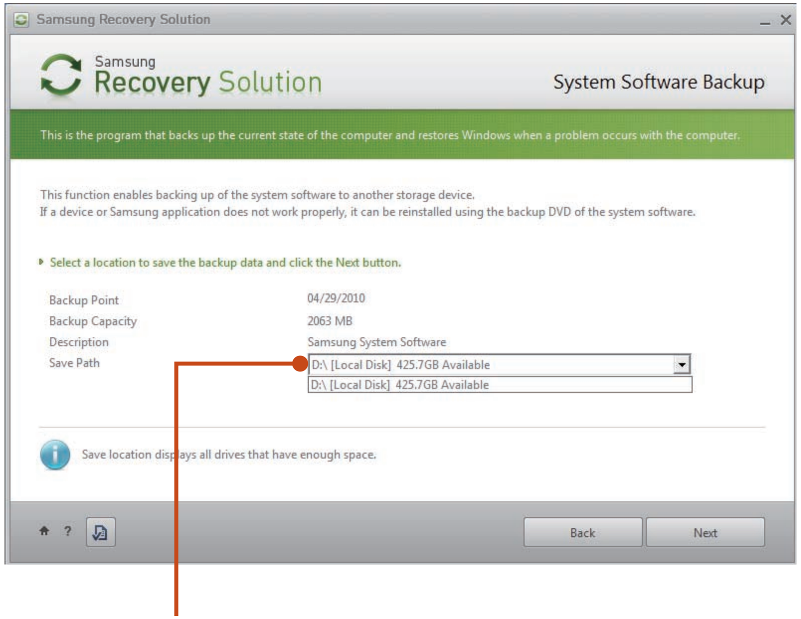
3 After the installation is complete, the computer will restart.

Samsung Recovery Solution (Optional)

System Software Backup

1 When the initial menu screen appears, click **System Software > System Software Backup**.

2 Specify the Save Path.



This is the program that backs up the current state of the computer and restores Windows when a problem occurs with the computer.

This function enables backing up of the system software to another storage device.
If a device or Samsung application does not work properly, it can be reinstalled using the backup DVD of the system software.

Select a location to save the backup data and click the Next button.

Backup Point	04/29/2010
Backup Capacity	2063 MB
Description	Samsung System Software
Save Path	D:\ [Local Disk] 425.7GB Available D:\ [Local Disk] 425.7GB Available

Save location displays all drives that have enough space.

Select Drive D.

If you have specified a hard disk drive or a removable disk as the Save Path, the **SamsungSoftware** folder is created on the corresponding drive (e.g. D:\) and the system software programs are saved to that folder. Take care to not delete the folder.

3 If you click the **Next** button, the Software Backup begins.

4 After the backup, the **System Software Backup is completed** message appears.

- If you want to install the System Software Programs backed up on the drive, run the **SecSWMgrGuide.exe** file in the **SystemSoftware** folder.
- To delete Samsung Recovery Solution, refer to the Help section of the program.

Recovery Solution Representation (Optional)

What is a Recovery Area?

- Samsung computers have an additional partition to recover computers or save backup files.
  (Only for models with the Samsung Recovery Solution.)

  This partition is called a Recovery Area and it includes a recovery image that comprises of the OS and application programs.
- You can either double-click the Samsung Recovery Solution icon on the desktop or press **F4** while booting the computer to enter the Recovery Area. Then you can back up the present computer state or recover the computer from backed up images.
- For deleting the Recovery Area, you need to use an additional Recovery Area Removal Tool. After deleting the recovery area, you can use the newly created partition for other uses, such as for saving personal data. Be careful that once the recovery area is deleted, the Samsung Recovery Solutions will not work anymore.

The capacity representation of the hard disk drive(HDD) in Windows is different from the product specifications.

- The capacity of the storage device (HDD) of the manufacturer is calculated assuming that 1KB=1,000 Bytes. However, the operating system (Windows) calculates the storage device capacity assuming that 1KB=1,024 Bytes, and therefore the capacity representation of the HDD in Windows is smaller than the actual capacity.

  This is due to the difference in capacity calculation and does not mean the installed HDD is different from the product specifications.
- The capacity representation in Windows may be smaller than the actual capacity because some programs occupy a certain area of the HDD outside of Windows.
- For models with Samsung Recovery Solution, the HDD capacity representation in Windows may be smaller than the actual capacity because Samsung Recovery Solution uses a hidden area of about 5~20GB of the HDD to save the recovery image, and that hidden area is not counted towards the total size available to Windows.

  The size of Samsung Recovery Solution varies by models because of the different size of applied programs.

Chapter 5.
Appendix

Important Safety Information

Safety Instructions

Your system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

> ! Always follow these instructions to help guard against personal injury and damage to your system.

Setting Up your System

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should be operated only with the type of power source indicated on the rating label.
- Ensure that the electrical outlet you are using to power your equipment is easily accessible in case of fire or short circuit.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Ensure that the fan vents on the bottom of the casing are clear at all times. Do not place the computer on a soft surface, doing so will block the bottom vents.
- If you use an extension cord with this system, make sure that the total power rating on the products plugged into the extension cord does not exceed the extension cord power rating.

Care During Use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to not eat or drink near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer.

  Dispose of batteries according to the manufacturers instructions. If the CMOS battery requires replacement insure that a qualified technician performs the task.
- When the computer is turned off, a small amount of electrical current still flows through the computer.
  To avoid electrical shock, always unplug all power cables, remove the battery and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not operate properly when the operating instructions are followed.
  - The system was dropped or the casing is damaged.
  - The system performance changes.

The Instruction On Safety Operation of NotePC

1. When installing and operating devices please refer to safety requirements in the user guide.
2. Devices can be used only with the equipment specified in the technical specifications of the devices.
3. If any smell of burning or smoke is detected from the computer the unit should be switched off and battery removed. The unit should be checked by a qualified technician before reuse.
4. Service and repair of devices should be carried out by authorized service centers.
5. Do not allow your portable computer to operate with the base resting directly on exposed skin for extended periods of time. The surface temperature of the base will rise during normal operation (particularly when AC Power is present). Allowing sustained contact with exposed skin can cause discomfort or eventually a burn.

Replacement Parts and Accessories

Use only replacement parts and accessories recommended by manufacturer.

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Do not use this product in areas classified as hazardous. Such areas include patient care areas of medical and dental facilities, oxygen rich environments, or industrial areas.

Battery Disposal

Do not put rechargeable batteries or products powered by non-removable rechargeable batteries in the garbage.

Contact the Samsung Helpline for information on how to dispose of batteries that you cannot use or recharge any longer.

Follow all local regulations when disposing of old batteries.

THERE IS A RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Laser Safety

All systems equipped with CD or DVD drives comply with the appropriate safety standards, including IEC 60825-1. The laser devices in these components are classified as “Class 1 Laser Products” under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

- **Laser Safety Note:**

  Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.
- Class 1M laser radiation when operating part is open.

  Do not view directly with optical instruments.
- Class 3B invisible laser radiation when open.

  Avoid exposure to the beam.

Connecting and Disconnecting the AC adapter

The socket-outlet should be installed near the equipment and should be easily accessible.

Do not unplug the power cord by only pulling the cable.

Power Cord Requirements

The power cord set (wall plug, cable and AC adapter plug) you received with your computer meets the requirements for use in the country where you purchased your equipment.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your authorized dealer, reseller, or service provider.

General Requirements

The requirements listed below are applicable to all countries:

- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 7 A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system. (USA ONLY)
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C7 (or C5) connector, for mating with appliance inlet on the computer.

Wireless Guidance

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The RF field strength of the wireless device or devices that may be embedded in your notebook are well below all international RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed on the next page:

- Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane.
  802.11ABGN (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.
- In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.

Regulatory Compliance Statements

- Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.
- If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.
- Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.
- Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

United States of America

USA and Canada Safety Requirements and Notices

Do not touch or move antenna while the unit is transmitting or receiving.

Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.

Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.

The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).

The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Explosive Device Proximity Warning

Do not operate a portable transmitter (such as a wireless network device) near unshielded blasting caps or in an explosive environment unless the device has been modified to be qualified for such use.

Regulatory Compliance Statements

Use On Aircraft Caution

Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: Refer to the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Intel could void the user's authority to operate this device.

Unintentional Emitter per FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: "Something About Interference."

This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction will be the responsibility of the user. Use only shielded data cables with this system.

Intentional emitter per FCC Part 15

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter except the installed Bluetooth transmitter.

Regulatory Compliance Statements

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Wireless devices are not user serviceable. Do not modify them in any way.

Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

FCC Statement for Wireless LAN use:

While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1mW/cm2 may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times.

This device can not be colocated with another transmitter and transmitting antenna.

FCC Part 68 (If fitted with a modem device.)

This equipment Complies with part of the FCC rules. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following USOC jacks : RJ11C

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or promises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.

The REN is used to determine the quantity of devices which may be connected to telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by total RENs, contact the local telephone company to determine the maximum REN for the calling area.

If the terminal equipment causes harm to the telephone network, the Telephone Company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advanced notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment (Modem) for repair or warranty information, please contact your local distributor. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

The user must use the accessories and cables supplied by the manufacturer to get optimum performance from the product.

No repairs may be done by the customer.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be any number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your fax machine, refer to your communications software user manual.

Canada

Unintentional Emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limitesapplicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Intentional Emitter per RSS 210

This device complies with RSS 210 of Industry Canada. Operation is subject to the following two onditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.”

L ‘ utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l’ utilisateur du dispositif doit étre prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term “IC” before the equipment certification number only signifies that the Industry Canada technical specifications were met. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication. To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Pour empecher que cet appareil cause du brouillage au service faisant l’objet d’une licence, il doit etre utilize a l’interieur et devrait etre place loin des fenetres afin de Fournier un ecram de blindage maximal. Si le matriel (ou son antenne d’emission) est installe a l’exterieur, il doit faire l’objet d’une licence.

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

When using IEEE 802.11a wireless LAN, this product is restricted to indoor use due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65 to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The maximum allowed antenna gain for use with this device is 6dBi in order to comply with the E.I.R.P limit for the 5.25- to 5.35 and 5.725 to 5.85 GHz frequency range in point-to-point operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on.

The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter except the installed Bluetooth transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

To prevent radio interference to licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

(Si l’appareil est équipé d’une bande 2,4 G ou 5 G)

Des dispositifs de basse puissance, de type radio LAN (périphériques de communication sans fil par radiofréquence RF) fonctionnant sur une bande de 2.4GHz/5GHz sont peut-être intégrés dans votre appareil. Cette section est applicable uniquement si ces dispositifs sont présents. Consultez l’étiquette du système pour vérifiez la présence de dispositifs sans fil.

Les dispositifs sans fil qui peuvent être intégrés dans votre système sont uniquement aptes pour une utilisation au Canada si l’étiquette du système présente un nombre d’identification d’Industrie Canada.

En cas d’utilisation d’un LAN sans fil IEEE 802.11a, ce produit ne peut être utilisé qu’à l’intérieur en raison de son fonctionnement dans une plage des fréquences allant de 5,15 à 5,25 GHz. Industrie Canada exige l’utilisation de ce produit à l’intérieur pour une plage des fréquences allant de 5,15 à 5,25 GHz afin de réduire les éventuelles interférences nuisibles avec les systèmes mobiles par satellite du même canal. Le radar de grande puissance est considéré comme l’utilisateur principal des bandes de 5,25 à 5,35 GHz et de 5,65 à 5,85 GHz. Ces stations radar peuvent provoquer des interférences avec ce périphérique et/ou l’endommager.

Le gain d’antenne maximum autorisé avec ce périphérique est de 6 dBi afin de respecter la limite de P.I.R.E. pour une plage des fréquences de 5,25 à 5,35 GHz et de 5,725 à 5,85 GHz dans un fonctionnement point à point.

Regulatory Compliance Statements

La sortie de puissance du dispositif sans fil (ou des dispositifs) qui peut être intégré dans votre système est bien inférieure aux limites d'exposition de RF établies par Industrie Canada.

Son utilisation est soumise aux deux conditions suivantes : 1) ce dispositif ne peut pas provoquer d'interférences nuisibles et 2 2) ce dispositif doit accepter toute interférence reçue, y compris les interférences qui peuvent provoquer des anomalies dans le système.

! Afin de prévenir des interférences de radio au service autorisé, ce dispositif est prévu pour être utilisé à l'intérieur et éloigné des fenêtres pour fournir une protection maximum. Un équipement (ou son antenne de transmission) qui est installé à l'extérieur est sujet à une autorisation.

! Les dispositifs sans fil ne peuvent pas être réparés par l'utilisateur. Ne les modifiez en aucune façon. La modification d'un dispositif sans fil annulera votre autorisation à son utilisation. Contactez le fabricant pour la réparation.

Telecommunications per DOC notice (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should make sure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Regulatory Compliance Statements

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

European Union

European Union CE Marking and Compliance Notices

Products intended for sale within the European Union are marked with the Conformité Européene (CE) Marking, which indicates compliance with the applicable Directives and European standards and amendments identified below. This equipment also carries the Class 2 identifier.

The following information is only applicable to systems labeled with the CE mark CE.

European Directives CE

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC
- R&TTE Directive 1999/5/EC

Manufacturer Information

Samsung Electronics Co., Ltd.

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For the web or the phone number of Samsung Service Centre, see the Warranty or contact the retailer where you purchased your product.

European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a Notebook computer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz band, may be present (embedded) in your notebook system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

CE (!)

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark CE with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in you notebook is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

The low band 5.15 - 5.35 GHz is for indoor use only.

See 802.11b and 802.11g restrictions for specific countries or regions within countries under the heading “European Economic Area Restrictions” below.

Regulatory Compliance Statements

EU R&TTE Compliance Statements

cs	**Česky [Czech]**	Samsung tímto prohlašuje, že tento Notebook PC je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da	**Dansk [Danish]**	Undertegnede Samsung erklærer herved, at følgende udstyr Notebook PC overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de	**Deutsch [German]**	Hiermit erklärt Samsung, dass sich das Gerät Notebook PC in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et	**Eesti [Estonian]**	Käesolevaga kinnitab Samsung seadme Notebook PC vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en	**English**	Hereby, Samsung, declares that this Notebook PC is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es	**Español [Spanish]**	Por medio de la presente Samsung declara que el Notebook PC cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el	**Ελληνική [Greek]**	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Samsung ΔΗΛΩΝΕΙ ΟΤΙ Notebook PC ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr	**Français [French]**	Par la présente Samsung déclare que l’appareil Notebook PC est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it	**Italiano [Italian]**	Con la presente Samsung dichiara che questo Notebook PC è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
lv	**Latviski [Latvian]**	Ar šo Samsung deklarē, ka Notebook PC atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
lt	**Lietuvių [Lithuanian]**	Šiuo Samsung deklaruoja, kad šis Notebook PC atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl	**Nederlands [Dutch]**	Hierbij verklaart Samsung dat het toestel Notebook PC in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt	**Malti [Maltese]**	Hawnhekk, Samsung, jiddikjara li dan Notebook PC jikkonforma mal-ħtiāijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

hu	**Magyar [Hungarian]**	Alulírott, Samsung nyilatkozom, hogy a Notebook PC megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
pl	**Polski [Polish]**	Niniejszym Samsung oświadcza, Ŝe Notebook PC jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt	**Português [Portuguese]**	Samsung declara que este Notebook PC está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
sl	**Slovensko [Slovenian]**	Samsung izjavlja, da je ta Notebook PC v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
sk	**Slovensky [Slovak]**	Samsung týmto vyhlasuje, že Notebook PC spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi	**Suomi [Finnish]**	Samsung vakuuttaa täten että Notebook PC tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
sv	**Svenska [Swedish]**	Härmed intygar Samsung att denna Notebook PC står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
	Íslenska [Icelandic]	Hér með lýsir Samsung yfir því að Notebook PC er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
no	**Norsk [Norwegian]**	Samsung erklærer herved at utstyret Notebook PC er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
	Türkiye [Türkçe]	Bu belge ile, Samsung bu Notebook PC'nin 1999/5/EC Yönetmeliğinin temel gerekliliklerine ve ilgili hükümlerine uygun olduğunu beyan eder.

To view the EU Declaration of Conformity for this product (in English only), go to: http://www.samsung.com/uk/support/download/supportDownMain.do then search the model number of the product.

If the Declaration of Conformity for the model you are interested in is not available on our web-site, please contact your distributor.

Regulatory Compliance Statements

European Economic Area Restrictions

Local Restriction of 802.11b/802.11g Radio Usage

[Note to integrator: The following statements on local restrictions must be published in all end-user documentation provided with the system or product incorporating the wireless product.]

> Due to the fact that the frequencies used by 802.11b/802.11g wireless LAN devices may not yet be harmonized in all countries, 802.11b/802.11g products are designed for use only in specific countries or regions, and are not allowed to be operated in countries or regions other than those of designated use.
>
> As a user of these products, you are responsible for ensuring that the products are used only in the countries or regions for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country or region of use. Any deviation from permissible settings and restrictions in the country or region of use could be an infringement of local law and may be punished as such.

The European variant is intended for use throughout the European Economic Area. However, authorization for use is further restricted in particular countries or regions within countries, as follows:

General

European standards dictate maximum radiated transmit power of 100 mW effective isotropic radiated power (EIRP) and the frequency range 2400 – 2483.5 MHz.

The low band 5.15 - 5.35 GHz is for indoor use only.

Belgium

The product may be used outdoors, but for outdoor transmissions over a distance of 300m or more, a license from the BIPT is required.

This restriction should be indicated in the manual as follows:

Dans le cas d’une utilisation privée, à l’extérieur d’un bâtiment, au-dessus d’un espace public, aucun enregistrement n’est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprès de l’IBPT est requise. Pour une utilisation publique à l’extérieur de bâtiments, une licence de l’IBPT est requise. Pour les enregistrements et licences, veuillez contacter l’IBPT.

France

For Metropolitan departments:

2.400 - 2.4835 GHz for indoor use.

2.400 - 2.454 GHz (channels 1 to 7) for outdoor use.

For Guadeloupe, Martinique, St Pierre et Miquelon, Mayotte:

2.400 - 2.4835 GHz for indoor and outdoor use.

For Reunion, Guyane:

2.400 - 2.4835 GHz for indoor use.

2.420 - 2.4835 GHz for outdoor use (channels 5 to 13)

The low band 5.15 - 5.35 GHz is for indoor use only.

European Telecommunication Information (for products fitted with EU-approved modems)

Marking by the symbol CE indicates compliance of this equipment to the Radio and Telecom Terminal Equipment Directive 1999/5/EC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

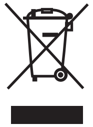
CTR 21 - Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi-Frequency (DTMF) signaling.

> Although this equipment can use either loop disconnect (pulse) or DTMF (tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation.
>
> It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call setup.

This equipment has been approved to Council Decision 98/482/EEC - "CTR 21" for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact manufacturer Technical Support.

WEEE Symbol Information



Correct disposal of this product (Waste Electrical & Electronic Equipment)

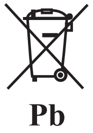
(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material re-use, please separate batteries from other types of waste and recycle them through your local, free battery return system.

USA ONLY

This Perchlorate warning applies only to primary CR (Maganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA.
“Perchlorate Material- special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate.”

Contains Mercury, Dispose According to Local, State or Federal Laws.

For details see lamprecycle.org, eise.org, or call 1-800-Samsung.

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:www.samsung.com/recyclingdirect Or call, (877) 278-0799

Product Specifications

The system specifications may differ depending on the derived models. For detailed system specifications, refer to the product catalogue.

CPU (Optional)	Intel Pentium DualCore Processor Intel Core i3/i5 Processor
Main Memory	DDR3 SODIMM
Main Chipset	Intel H61
Storage Device	S-ATA2 HDD
Graphics	Intel HD Graphics (Internal) AMD Radeon HD7470M (External)
Operating Environment	Temperature: -5~40°C for storage, 10~35°C when operating Humidity: 5~90% for storage, 20~80% when operating
AC/DC Rating	Input) 100-240VAC, 50/60Hz Output) 19VDC 4.74A
PC Rating	19VDC 4.74A(90W)

- Optional components may not be provided or different components may be provided depending on the computer model.
- The system specifications are subject to change without notice.
- The hard disk drive capacity of a computer in which Samsung Recovery Solution is installed, is represented as smaller than the product specification.
- For the replacement or upgrade of the memory for this product, please ask for assistance from your service center.
- To replace the storage device (HDD) of this product, please ask for assistance from the service center.
- The amount of memory that Windows can use may be smaller than the actual amount of memory available.

Product Specifications

Registered Trademarks

Samsung is a registered trademark of Samsung Co., Ltd.

Intel, Core™ i5/i3 are registered trademarks of the Intel Corporation.

Microsoft, MS-DOS, and Windows are registered trademarks of the Microsoft Corporation.

All other product or company names mentioned herein are registered trademarks of their respective companies.

ENERGY STAR® Partner

As an ENERGY STAR® Partner, SAMSUNG has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Glossary

The Glossary lists the terminologies used in this User Guide. For terminologies other than these, look in Windows Help.

Backup

A way to save the current data to restore it later if necessary.
A backup is a way to restore computer data when the data or computer is damaged.

Chargeable USB

This program enables supplying power to a specific USB port when the system is in power saving mode, hibernation mode or off.

Client

This refers to a computer that uses a shared network resource provided by a server.

DDR SDRAM
(Double Data Rate Synchronous Dynamic Random Access Memory)

DRAM is a memory type whose cells consist of a capacitor and transistor manufactured at a low price. SDRAM is a memory type whose performance has been improved by synchronizing the clock with the external CPU clock. DDR SDRAM is a memory type whose performance has been improved by doubling the operating speed of the SDRAM and is widely used nowadays. This computer uses DDR SDRAM.

Device Manager

An administrative tool used to manage computer devices. You can add or remove hardware or update a device driver using the Device Manager.

DHCP (Dynamic Host Configuration Protocol)

This refers to automatically allocating IP addresses to the users on the network by the network administrators.

Direct X

An application interface developed to enable Windows application programs to access hardware devices at a very high speed. Since the operating speed of graphics, memory and sound cards must be very fast to provide high quality video and sound for games, Direct X enables faster control and interaction between applications and hardware devices. By using Direct X, the multimedia performance of Windows has been hugely improved.

Driver

Software that interacts between the hardware and the operating system. An operating system knows the hardware information and controls the hardware. In general, a driver is supplied with the corresponding hardware device.

DVD (Digital Versatile Disk)

DVD was developed to replace CD (compact disk). Although the shape and size of the disc are the same as that of a CD, the capacity of a DVD is at least 4.7GB while the capacity of a CD is 600MB. DVD video is digital unlike VHS (analog) video and supports MPEG2 compression and digital audio. To play a DVD, a DVD drive is required.

Firewall

A security system used to protect an internal network or intranet from external networks through an authentication procedure.

HDMI

This is a digital video / audio interface specification that transmits video and audio signals over a single cable.

Hibernation Mode

A power mode that saves all data in memory to the hard disk and turns the CPU and hard disk off. When canceling Hibernation Mode, all application programs that were running are restored to their last state.

Icon

This refers to a small image that represents a file that users can use.

IEEE802.XX

This is a set fo specifications developed by the 802 committee of IEEE for the LAN connection method called XX.

LAN (Local Area Network)

A communications network connecting computers, printers and other devices within a local area such as within a building. A LAN enables all connected devices to interact with other devices on the network. The current LAN uses the Ethernet media access control method developed in the early 1980s. To connect to an Ethernet, a network card called a LAN card, Ethernet card or network interface card is required. To exchange data between computers, a protocol is required besides the hardware equipment. Windows Vista uses TCP/IP as the default protocol.

LCD (Liquid Crystal Display)

There are Passive Matrix and Active Matrix LCD types. This computer uses the Active Matrix type LCD called a TFT LCD. Since an LCD is implemented by transistors instead of a cathode-ray tube unlike a CRT, its size can be slim. And because it does not blink, it reduces eye strain.

Network

A group of computers and devices, such as printers and scanners, connected by a communications link. A network can be either small or large and can be connected permanently through cables or temporarily through telephone lines or wireless links. The biggest network is the Internet, a worldwide network.

Network Administrator

A user who plans, configures and manages network operations. Sometimes, a network administrator is called a system administrator.

Notification Area

This refers to the right area of the Taskbar including program icons such as the volume control, the power options and the time.

Partition

This refers to the act or practice of dividing the storage space of a hard disk drive into separate data areas known as partitions. If a 100GB hard disk drive is partitioned into 2 x 50GB partitions, the hard disk drive can be used as if there are 2 hard disk drives.

Protocol

A protocol is a set of rules used by computers to communicate with each other across a network. A protocol is a convention or standard that controls or enables the connection, communication, and data transfer between computing endpoints. It defines the data transmission procedures and the transmission medium for more efficient network functions.

Quick Launch

This refers to a toolbar that can be configured so that you can launch a program such as Internet Explorer or display the Windows Desktop with one click. You can add any icon to the quick launch area of the Taskbar and launch frequently used program by clicking that icon.

SDHC (Secure Digital High Capacity) card

This is the extension of the SD card that supports over 2GB bytes.

Server

In general, a server refers to a computer that provides shared resources for network users.

Share

This refers to setting a resource of a computer such as a folder or printer so that other users can also use it.

Shared Folder

A folder that can be used by other users on the network.

Sleep Mode

A power mode that enables computers to save power consumption when they are not being used. When a computer is in Sleep Mode, the data on the computer memory is not saved to the hard disk. If the power is turned off, the data in memory will be lost.

System File

System Files refer to files that are read and used by the Windows operating system. In general, system files must not be deleted or moved.

TCP/IPv4

This is a 4 byte (32 bit) address system separated into each byte (8 bits) by a dot and each byte is represented as a decimal number.

USB (Universal Serial Bus)

This refers to a serial interface standard developed to replace the conventional interface standards such as Serial and PS/2. The data transmission specifications are one of the interface standards used to connect a computer to peripheral devices. These specifications include USB 1.0, 1.1, 2.0 and 3.0.

It is appropriate to support peripheral devices that require high data rates such as an AV device, secondary HDD or CD-RW. The higher the version (e.g. USB 3.0), the higher the data rate provided.

Virtual XP Mode

This is a virtual operating system that enables running Windows XP programs on the Windows 7 operating system. Using this mode, you can run programs that do not run on Windows 7.

Index